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CLINICAL LECTURE.

QUINSY. — PERICARDITIS COMPLICATING CHRONIC BRIGHT'S DISEASE.—EXHAUSTION FROM EXPOSURE AND CARDIAC DISEASE.[1]

BY JAMES TYSON, M. D.,

LATE PHYSICIAN TO THE PHILADELPHIA HOSPITAL; PROFESSOR OF CLINICAL MEDICINE, UNIVERSITY OF PENNSYLVANIA.

Quinsy.

Gentlemen: The first disease I have to illustrate this morning is a very simple one, and yet one of great practical importance. The case is one of ordinary tonsillitis, or quinsy. The man's history is simple. He had his feet wet on November 27. The next day he was seized with a mild chill, and his throat on both sides became swollen and tender. He experienced great difficulty in eating and swallowing, and there was even at first obstruction in breathing. He had no chill after the initial one. This is the typical history of tonsillitis, a disease most easy of diagnosis.

It is with especial reference to the treatment, therefore, that I bring him before you, for I know of no simple disease in the treatment of which one may be more embarrassed than this.

Tonsillitis is an inflammation of the tonsil glands, usually terminating in suppuration. It is also called quinsy, although this term is sometimes restricted to the suppurating form. The most important question to decide, when called to a case of tonsillitis, is whether it is going to gather immediately, because the decision must influence the treatment. It is, however, a question not always easy to answer, and to say whether we shall use remedies to prevent suppuration, or to favor it. Very often for three or four days we will

[1] Delivered at the Philadelphia Hospital.

use means to prevent suppuration, only to see an abscess form in spite of what has been done. Again, at times, it is exceedingly difficult to know whether pus has actually formed. The duration of the disease is so uncertain under any circumstances that it is well to make an exceedingly guarded prognosis, telling the patient that ten days may elapse before a culmination is reached. While the prognosis is almost invariably ultimately favorable, it has happened that, in consequence of an involvement of both tonsils, the patient has been suffocated; and cases, though rare, have occurred where the sudden breaking of a tonsil abscess has caused death from suffocation.

Now as regards treatment. If we see the patient very soon after the chill it is reasonable to expect that antiphlogistic measures may cut the inflammation short. Among the best means for this purpose are pieces of ice placed in the mouth more or less constantly, and in addition to this, ice bags to the angle of the jaw. It may be desirable to satisfy the patient to use gargles, but I doubt whether they are useful. It is also doubtful whether the usual astringent solutions, such as silver nitrate, tannic acid and the like, are of value; but they may be used in the early stages. More efficient as a curative measure, and also useful to diminish tension and allay pain, is scarification. This may be followed by the local application of a four per cent. solution of cocaine, or a spray of the same, thrown into the throat, or cocaine may be used independent of scarification.

But are there any symptoms by which to determine a change of treatment from the antiphlogistic to that favoring suppuration? The recognition of fluctuation, of course; but this is not always easy. We may aid ourselves in this by putting the finger under the angle of the jaw, and pressing on the tonsil, and then, with another finger inside, make the touch. Sometimes it is difficult to get the mouth open wide enough to do this, but patience will generally accomplish it. Not infrequently the sense of fluctuation is obtained, and the bistoury plunged into the tonsil without result. It has happened that the internal carotid artery has been wounded in cutting a tonsil abscess, and it is accordingly recommended that the bistoury be guarded. But it takes a pretty deep cut to cause this accident. In other cases fluctuation is very evident, and not a very deep incision will bring out the pus, while scarification paves the way for the tonsil to relieve itself, as often happens.

A person having tonsillitis once is apt to have other attacks; and some people have quinsy every year. In the patient before us we have been able to abort the disease. Both tonsils were scarified, relieving the hyperemia, and the case has gone on to resolution. Usually four or five days limits the duration of a case of tonsillitis, but, as already mentioned, it may run on to ten days, and hence it is well to prepare the patient accordingly.

Pericarditis Complicating Chronic Bright's Disease.

I next present a patient who has Bright's disease, of what particular form does not concern us at present. But there is associated with it a complication quite common to this affection, namely, pericarditis. The patient is also almost blind from the presence of an albuminuric retinitis.

Pericarditis is secondary mainly to two diseases, acute rheumatism and Bright's disease. It also occurs in connection with pneumonia and pleurisy and with septic conditions, such as puerperal fever. Why this condition is favored by Bright's disease is not certainly known, nor do we certainly know how it is caused by rheumatism; but it is supposed that the poison, whatever it may be, which circulating with the blood causes rheumatism, acts also to produce the pericardial inflammation, which is favored by the friction of the surfaces. So the effete matters which soon accumulate in the blood in Bright's disease, are supposed to act similarly. In every case of Bright's disease, and of rheumatism, therefore, we should constantly examine the heart with a view to the recognition of this condition, and thus, while studying this case, we discovered a friction sound. These sounds are often of a very fleeting character, and will disappear in the course of a day. It was present yesterday; I will see if it be still here. It is still audible, but it is much less distinct than it was. It is a very low, soft rubbing, and has lost its "to and fro" character. It is not easy always to recognize a pericardial friction sound. The difficulty here would be even greater if we had not had the opportunity of recognizing it at a time when it was more distinct. There are several characteristics by which we distinguish it from cardiac murmurs; and yet it is often

mistaken for a valvular murmur, and *vice versa*. A characteristic friction sound, in the first place, is a to and fro sound, and while double in one sense, is not double like a double valvular murmur, as it has not the same relation to the systole and diastole. Secondly, it is a more superficial sound than a valvular murmur. Thirdly—although this is not constantly the case—it is apt to change its situation with a change in the position of the patient, the heart rolling from one side to the other. Fourthly, the character of the sounds are different. A friction sound is never blowing, whistling or piping, as is the valvular murmur, but when the valvular murmur approaches a soft, rubbing character, the resemblance is closer. A friction sound may be crepitating or creaking at times, depending upon the firmness of the lymph which is the cause of it.

Pericarditis is an inflammation of the pericardium with an exudation of lymph in the first stage, producing a roughness on the two surfaces of the pericardium, whence the friction sound. As this lymph is soft and gelatinous, or hard and rough, it gives a difference in the character of the sound. Very often our diagnosis of pericarditis is confirmed by the onset of the second stage, namely, the effusion of serum with a corresponding increase in the area of the heart's dulness; a dulness which is apt to be conical in shape. This dulness at first is associated with the friction sound. The obtuse apex of this dulness may be high up under the clavicle, while the point of highest dulness in health is at the fourth rib. In this case the dulness does not mount very high. It reaches only the third interspace. I am free to judge, therefore, that there is no pericardial effusion here. In order to settle the question further, I will look for the apex beat, and I find it most distinct in the line of the nipple, and below—outside of the normal position; this is due to a slight hypertrophy which is here present. Nor is there a trace of dulness at the apex.

Where a pericardial effusion exists, there is generally dyspnœa. The action of the heart becomes irregular and embarrassed. During the early stage of pericarditis, outside of the physical symptoms, very often there is nothing distinctive. The pain of the inflammation is very much less than in pleurisy, although the membranes are the same. There is pain and discomfort, however, to a certain extent. There is sometimes an associated pleurisy, and, it is claimed by some, that pain when present is due to this complication.

As regards treatment, the first thing to do is to put a blister over the heart at once, and follow this, or associate it, with measures to regulate the heart, such as digitalis. A blister in pericarditis gives excellent results. Almost immediately the patient becomes comfortable, the dyspnœa passes away and the physical signs disappear. We may prevent an effusion by its use. In rheumatic cases we should treat for the rheumatism as well, and similarly in Bright's disease. These cases almost always need stimulants.

These measures are, as a rule, efficient. Very rarely does a patient die from the effects of pericarditis. Sometimes it happens that the effusion increases to such an extent that unless prompt action is taken the patient will perish. Paracentesis of the pericardium must then be done in the fifth interspace, one inch to the left of the sternum, to avoid the artery which runs along the edge of the sternum. When there is pus in the pericardium it is absolutely necessary to tap, and a drainage-tube may even be inserted into the sac. Adhesion often takes place as the case recovers, the two surfaces becoming united as the effusion is removed. Complete adhesion is not favored by the constant movement of the heart, and bands of adhesion are therefore often seen. At times, however, the pericardial sac is fused into the visceral layer. In such cases with every beat of the heart one or more interspaces are drawn in, and this aids us in making the diagnosis of adhesions.

Exhaustion from Exposure and Cardiac Disease.

The third case I show you is an old man who says he is 102 years old; but I fear he is not correct as regards this. He is unable to talk our language, and I can get no history. When admitted on Saturday last, he was almost pulseless. Hot-water bags were placed to his feet. He had dropsy of the legs to a very positive degree. Listening over his heart, we found it very irregular, but could make out no murmur. We examined his urine and found it loaded with albumin. We concluded, therefore, that there was Bright's disease. This is a case which will demonstrate the value of comfort, warmth and rest. On Monday we examined his urine and found no albumin. His heart had steadied somewhat, but was still irregular.

To-day we recognized a systolic murmur. The heart, although much more regular than it was, is still very feeble. I wished to show you him particularly to illustrate the value of warmth and rest. The dropsy and albuminurea have disappeared, and the heart has become stronger, and I have no doubt the man will be about again. The necessity of caution in prognosis is also thus shown.

COMMUNICATIONS.

THE DIFFERENTIAL DIAGNOSIS AND TREATMENT OF THE CONTINUED FEVERS OF THE SOUTHERN STATES.[1]

BY B. F. HUMPHREYS, M. D.,

HAWKINS, TEXAS.

The monograph of Dr. W. W. Johnston "On the Geographical Distribution of Typhoid Fever in the United States—its relation to Fevers of Malarial Origin and to Obscure and Unclassified Forms of Continued Fevers," is a valuable contribution to this subject, inasmuch as it is a collective investigation reflecting the opinion of three hundred and fifty reputable physicians, chiefly Southern practitioners, whose views, for the most part, are based upon clinical experience. Although there seems to be much confusion, apparently due to a diversity of opinions existing in regard to the nature, classification and nomenclature of this group of fevers, there are, nevertheless, in these brief historical sketches, the outlines of the prevailing types of the continued fevers, indigenous to the Southern States.

Having elsewhere discussed this topic somewhat at length,[2] it seems unnecessary at present to enter into a long study of the nature, differential diagnosis and treatment of these fevers. But a *résumé* of some of the leading aspects which pertain to this subject may be of interest at this time. The geological conformation, latitude, climate and other characteristics of the Southern States, especially those bordering on the Gulf and Atlantic and those lying in the southern portion of the great valley of the Mississippi, naturally incline to the propagation of the continued fevers peculiar to these States. These fevers differ so materially from those which have long been recognized under a special nomenclature that has been almost universally adopted, it must be evident to all that the unclassified forms of these continued fevers, concerning which there has been so much misunderstanding, should receive the consideration which the importance of the subject seems to demand, by giving to each an individualized distinction and cognomen, or by referring them, as suggested by Prof. W. W. Johnston, to typhoid fever or to adynamic malarial fever.

Much confusion has existed in relation to the true nature of these continued fevers, which is probably due, in a measure at least, on the one hand to incorrect methods of investigation, and, on the other, to a proneness to classify them under a universally recognized nomenclature which is in no wise suited to the character of a fever, entitled perhaps to an individualized distinction. This is probably true as regards a certain type of continued fever prevalent in these States, which, for want of a more appropriate name, had frequently been designated under the neologistic term of "Typho-Malarial" fever, thereby usually nullifying the diagnosis and of necessity increasing the confusion.

The result of this seems to be, that any fever presenting symptoms resembling typhoid on the one hand and malarial fever on the other has usually been termed typho-malarial fever by the advocates of that theory. The diagnosis is therefore frequently made without observing the special restrictions necessary to justify such a classification—if, indeed, the term is worthy of further recognition and continuance. If so, then it must be conceded that it should be used only in the restricted sense the author of the term finally proposed that it might be applied: to those fevers which result from the combined influence of the causes of malarious fever and of typhoid fever.

The late Dr. Samuel M. Bemiss, in his monograph on typho-malarial fever, in *Pepper's System of Medicine*, while expressing the belief that the term might possibly be a convenient addition to medical nomenclature, insists upon restricting its use "to define a disease compounded of the two pathological factors, which when acting sep-

[1] Read before the American Medical Association, Nashville, Tenn., May 21, 1890.

[2] *Nashville Journal of Med. and Surg.*, March, June and December, 1885; March, June, July and September, 1886; *Therapeutic Gazette*, September, 1888; *Texas Courier-Record of Medicine*, February, 1889.

arately produce either typhoid or malarial fever." Professor Edward G. Janeway, as is well known, has also said that he did not believe it possible to admit the use of the term in any other sense than that adopted by Professor Flint in his *Practice of Medicine*, namely, as indicating the symptoms of malarial empoisonment to those of typhoid fever, with the effect of rendering the course of the disease peculiar, and he thinks it would have been wiser altogether to dispense with the term, and, under the head of typhoid fever, consider the malarial poison as capable of producing a considerable variation in the ordinary course of the disease.

Dr. Janeway's views, with reference to the irregularity which characterizes the use of the term (typho-malarial) are strongly corroborative of the opinions long held by Professor Robert Bartholow, who, from the first, as all the world knows, has opposed the adoption of this term in our nomenclature. Both of these distinguished clinicians have shown that the fever of typhoid is remittent in character, with a gradual rise during the first week of its course; that this same remittent character is seen in the latter part of the course of many typhoid cases; and that the occurrence of sepsis in the course of a typhoid fever will also produce an *apparent* malarial or *remitting* character to the fever. Reviewing his large clinical experience in New York City, Dr. Janeway assures us that it has happened extremely rarely that in a person dead of typhoid fever, evidences have been found at the autopsy proving the existence of malarial empoisonment.

It may be observed in reference to the restrictions implied and expressed in the use of the term typho-malarial, that the infrequency of typhoid fever in Southern latitudes, especially in the rural districts and in malarious regions, is a well-known fact which seems to controvert the probability, and even the possibility of the existence of so many cases which are diagnosticated typho-malarial fever, for the typhoid factor evidently is not present as frequently; and, if it were, it could not perhaps be as far diverted from its wonted course by any complication having the power to prevent the manifestation of the positive and recognized symptoms and lesions by which the disease is diagnosticated without reference to any complications. As I have elsewhere observed, it yet remains to be proven that the difference sometimes observed in the appearance of the ulcers in Peyer's patches is due, as has been claimed, to the combined operation of the malarial and the typhoid poison, producing a special character of ulcers pathognomonic of typho-malarial fever, so-called. If any such evidence could be uniformly produced from subjects who die of this fever, and if it could be demonstrated that the intestinal lesions differ from the *plaques molles*, or the *plaques dures* of typhoid, then the morbid anatomy might be regarded as affording some proof of a distinct or special type of fever, and thus furnish the basis for the differential diagnosis between it and typhoid fever. Until this is done, however, the characteristic intestinal lesions and other symptoms of enteric fever must still be regarded as the old and correct landmarks of typhoid fever, whatever complications may intervene.

The typhoid fever of this State, as generally seen, seems to be divested of many of its characteristic symptoms; wherefore it has been claimed by many of our physicians who have seen the disease as manifested in the more northern latitudes, that there is no true typhoid fever in this State. The fever termed "typhoid" possesses some of the characteristic symptoms—enough to justify the diagnosis. There is in this fever rarely the pronounced delirium common to it in higher latitudes; there is, however, a pseudo-somnolence, with a clouded mind; there are manifest symptoms of tenderness, pain and gurgling in the right iliac region; tympanitis; occasionally intestinal hemorrhage, and even perforation; the eruption of rose-colored spots is not constant; usually there is diarrhœa, but it does not seem to me that it is as characteristic as it is in the classic type of the disease. The fever, as generally seen here, might be termed a typical typhoid.

The excellent contribution of Dr. R. D. Maury, of Memphis, Tennessee, on "Malarial Continued Fever" (*American Journal of the Medical Sciences*, April, 1881), is an accurate pen-picture of a common type of continued fever which prevails in the Southern region of the Mississippi Valley. It is also quite prevalent in a large portion of this State, and probably to some extent throughout the southern portion of the United States. This is the form of continued fever, more than any other, perhaps, which has been termed typho-malarial, without any sufficient reasons for such an application of the term.

The symptoms of this fever, as detailed elsewhere, do not justify the use of the term, for they are very like those of typhoid fever, —in fact, there is rarely, if ever, a typical symptom present. In this type of continued fever, the cerebral symptoms alone seem quite sufficient to make a differential diagnosis between it and typhoid fever. The mind of the patient, as a rule, is unclouded, he being rather alert than otherwise. The patient manifests much anxiety and concern with reference to his condition; notes the arrival and departure of visitors, with whom he converses cheerfully much of the time, and not infrequently he desires to read a book or paper, especially during the morning hours. He rarely, if ever, has any of those illusions peculiar to typhoid fever.

But there are other points of difference between these fevers, which are worthy of note. There is in continued malarial fever a conspicuous absence of the characteristic symptoms of typhoid fever, and in their place is the unmistakable evidence of malarial empoisonment; although not so pronounced as in malarial remittents, it is nevertheless easily recognized. Periodicity here, as in other forms of malarial fever, is plainly manifested in the diurnal cold stage, which is invariably followed by an elevation of temperature. The cold stage may amount to a chill or rigor, but usually there is nothing more than a slight coolness of the feet and hands, the tip of the nose and the ears, the patient either covering himself more closely or calling for additional clothing. In other cases the cold stage is not so easily recognized. The morning temperature in mild cases is usually 101° to 102° F., in the evening 102° to 103½° F. In violent attacks, which are due probably to sepsis, the morning temperature ranges from 103° to 104° F., the evening pyrexia may be 105° or 106° F. Generally, however, the temperature does not exceed 104° F. There is usually a defervescence of the fever about the end of the third week, although it may continue much longer, generally terminating at or near a septenary period. The long-continued cases usually present adynamic symptoms.

As observed by Dr. Maury, "this fever presents a stadium of increase of about one week, a stadium of height of five or six days, and a stadium of decrease which terminates completely on the twenty-first day. . . . Constipation and a concave abdomen are marked features. All the essential features of typhoid or enteric fever are absent. No diarrhœa, no ilio-local tenderness or gurgling, no meteorism, no eruption of rose-colored spots. . . . It begins, continues and ends as a continued fever. . . . Its duration is no way affected by the exhibition of anti-periodic medicines."

In view of the foregoing facts and outlines, it seems strange indeed that any one would apply to this fever such a term as typhoid-malarial. There is not, in fact, even a shadow on which to base the diagnosis of typhoid.

But in the typical forms of typhoid fever, which are also common to the Southern States, the possibility of making an erroneous diagnosis is even greater than in the other forms of continued fever. The atypical forms of typhoid in tropical and subtropical regions—although not so common as the adynamic type of malarial fever already referred to—may mislead us in the diagnosis; for here there are some symptoms of typhoid on the one hand and a resemblance of malaria on the other; but a rigid and cautious investigation will enable us to establish a correct diagnosis even in the presence of complications. Quain observes that in India cases of enteric fever have been, and are, mistaken for malarial intermittent. He says: "There are cases of a mixed nature in which a thread of malaria, so to speak, runs through the symptoms and obscures them;" and, further, that "the term typho-malarial has come into use there to distinguish these cases." From which it appears that the symptoms of enteric fever there, as in other regions with similar environments, may be obscured by "a thread of malaria," thereby producing some variation of the ordinary course of a typhoid fever, as Professors Bartholow and Janeway have already observed. But it does not appear that the adoption of the term typho-malarial in India has helped them out of their confusion or that it has enabled them to avoid the mistakes to which the distinguished lexicographer refers. Indeed it seems that the term there, as elsewhere, only adds to the existing confusion. Dr. Johnston, in his paper already referred to, very truly observes: "As at present employed, the term typho-malarial has no determined meaning, leads to confusion and misunderstanding, is a cover for uncertainty and ignorance and should be discouraged and abandoned."

It may be observed in this connection that some of the most distinguished clini-

cians of other countries have also investigated this subject somewhat carefully. Dr. Edward Squire, of London, has given us an interesting and unique monograph, from his standpoint, relating to this topic. (*American Journal of the Medical Sciences*, April, 1887.) Dr. Squire, it may be remarked, was a medical officer in the British Army at Suakim, on the Red Sea, during the recent English campaign in Egypt, "where seemingly occurred the same forms of malarial disease that are met with elsewhere," as Dr. H. K. Leake has observed in an editorial review of the above paper (*Texas Courier-Record of Medicine*, July, 1887). To Dr. Squire's large clinical experience, in London and the English army, is added his collective investigation on this subject, contributed by many of the most eminent physicians of the English realm, including medical officers of the army and navy. Having reviewed the individual expressions and opinions of this reputable class of physicians, in connection with his own observations, Dr. Squire gives expression to the opinion held by the Commissioner of Inquiry concerning the disease as it prevailed in the United States army during the war between the States—resulting in the conclusion that the so-called typho-malarial fever was "bilious remittent fever, which, having not been controlled in the primary stage, had assumed that adynamic type which is present in enteric fever," from which Dr. Squire formulates the following definitions: "Typho-malarial fever is a malarial fever which has assumed that adynamic type which is present in enteric fever." He says the medical officers of the army support him in this definition; although Fleet Surgeon Norbury, while admitting that the symptoms of enteric fever may be modified by malaria, says: "The so-called typho-malarial fever is simply enteric fever and nothing else." From which it may be inferred that the cases which came under the observation of Surgeon Norbury were probably atypical forms of typhoid fever not very unlike those, observed elsewhere and designated as typho-malarial fever. But admitting that such cases should properly be referred to the typhoid group, the definition of Surgeon Norbury is not one of universal applicability, for it cannot include a large class of continued fevers of tropical and sub-tropical latitudes, where they are so frequently and erroneously classed as typho-malarial, without the enteric pathology noted by Norbury. To this latter class of fevers, Dr. Squire's definition seems applicable.

Simple continued fever, as commonly observed in this State, is a fever of more gravity and of longer duration than is ascribed to this form of fever in the text-books on practical medicine. It is a fever of a mild and negative character, without any of the special symptoms of typhoid or malarial fever and its course cannot be abridged by specific (quinine) treatment. It may not continue longer than from twelve to fourteen days, but sometimes it lasts longer—from eighteen or twenty to forty days, or even more. More frequently than otherwise, the fever subsides by the end of the second or third week. I have occasionally seen cases of this fever continue forty days, and, during all that time, the patient never went to bed, except at intervals during the day to rest himself. Usually, however, the subjects of this fever are unable to leave their beds, where a portion of the time is spent in conversation with visitors, and occasionally half an hour in light reading. The temperature rarely exceeds 103½° or 104° F., and much of the time it ranges between 101° and 102½° F. There is no distinctly marked periodicity or other characteristic evidence of malarial empoisonment. Usually it occurs during the heated summer season, or later on, just after a long, dry, hot summer, during which there has been very little manifestation of malarial fevers. Indeed it has seemed to me that in this fever, or in the graver forms of it at least, there is a striking resemblance to that type of fever designated as "thermic," so graphically described by Professor Horatio C. Wood and Professor John Guitéras, formerly of the United States Marine Hospital Service. As observed elsewhere, the pathogenesis of this type of fever is imperfectly understood, but it seems quite probable that the long-continued and excessive heat of tropical latitudes and adjacent regions may be capable of producing, not only in feeble and over-worked persons, but possibly in some constitutions apparently robust, a depression, exhaustion or more or less pronounced paresis of the inhibitory apparatus of the heat functions, thereby impairing the normal equilibrium between heat production and heat dissipation.

Dr. Maclagan in the Clinical Society of London (*Lancet*, March 31, 1888) maintained "that the metabolism of the tissues is interfered with through the nervous sys-

tem, there being a kind of paralysis of the inhibition which normally keeps the tissue changes within bounds, and that the resistance or inhibition of the heat-centres being removed, hyperpyrexia results." These expressions of opinion seem to be in accord with the theory of thermic fever, so ably maintained by Drs. Wood and Guitéras.

In view of the fact that the inherent tendency of the physiological functions is to resist any extraneous influence that may be capable of perverting the intrinsic or natural order and harmony essential to the "eternal fitness of things," it follows, as a matter of course, that the same cause, acting against greater resistance, may produce a fever of less intensity and continuity—one having a comparatively mild pyrexia—which is, indeed, the usual character of this type of fever. At least, such is its nature as manifested in this latitude.

Treatment seems to have but little, if any influence on the natural course of this type of fever, and about all that is necessary is to render the patient as comfortable as possible, administering such remedies as may be indicated, and cautiously avoiding unnecessary drugging, which interferes with the well-being of the patient. When the fever produces much discomfort and restlessness, a suitable dose of antipyrin or phenacetin, or some other mild sedative and antipyretic, may be given and repeated as often as necessary. To support the failing strength, a nutritious, easily-assimilated diet—not altogether nor always liquid—is our main reliance. Diuretics and aperients seem useful. Wine, brandy and other alcoholic stimulants appear to be beneficial in many of these cases, especially if supplemented with tonic doses of quinine, which seems to be useful in sustaining the capillary circulation. Two or three grains of quinine, every four hours, may be given to an adult with apparent benefit. Insomnia is sometimes troublesome. This is relieved by means of chloral, bromidia, sulphonal, or an opiate—the two first having the preference.

The diagnosis of any type of continued fever is seldom made and confirmed until the fever has run on in the even tenor of its way for several days or a week, unchecked by the repeated and persistent exhibition of antiperiodic remedies. By this time, if not sooner, we are driven to the conclusion, albeit reluctantly, that we have a special type of continued fever to deal with, instead of a mild, abortive remittent, as we had at first supposed and hoped. The first administration of quinine, in daily antiperiodic doses, with the view of checking the natural course of the fever, seems to be not only useless but positively detrimental to the well-being of the patient, and proves to be "a disturbing element," as Dr. Maury has truly remarked.

I have recently observed in reference to "The Use and Abuse of the New Antipyretics" (*Texas Courier-Record of Medicine*, April, 1890), it is not at all probable that any of these new antipyretics will ever supplant quinine—the old reliable antipyretic and antiperiodic in malarial fevers. By this I do not mean to say that quinine is a rival of the modern antipyretics; for it is not. But all of us, I suppose, have seen low forms of malarial remittent fever in which the vital powers were so overwhelmed with the effects of the disease, that we would not dare to administer antipyretics or depressing medicaments of any kind; for we have learned by experience, if not by precept, that nothing except quinine to cinchonism will relieve such patients, thereby demonstrating in such conditions its unrivalled properties as not only an antiperiodic, but a special and safe antipyretic as well.

As to the treatment of continued malarial fever, it may be remarked that the remedies usually administered in simple remittent fever, or quinine at least, will probably have been given before the physician is called. If such remedies have not been properly administered, they should be resorted to at once and fairly tested, with the view of arresting the fever, if possible; for it is widely believed that simple remittent fever not infrequently assumes a continued character through neglect or inefficient treatment at the outset; and careful observations seem to confirm this opinion. After these preliminary remedies, the treatment outlined for simple continued fever will usually prove satisfactory.

In the graver forms of the disease, dangerous symptoms are to be treated as they arise. The hepatic, digestive, renal and cutaneous functions require constant attention—never over-stimulating them and never permitting them to become suspended for any considerable length of time, which would evidently intensify and prolong the fever beyond its natural course and duration. All nervous disturbances should receive prompt attention. Here antipyrin and phenacetin seem to be exceedingly

useful. Hyperpyrexia, if due to sepsis, calls for antiseptic remedies. The hyposulphite of soda, eucalyptus, baptisia and "Bartholow's mixture" are all apparently useful in this condition. In some cases the hyperpyrexia seems to be the result of accumulated and intensified malarial influence. When this is the case, moderate cinchonism appears to be quite beneficial, reducing the temperature to a degree of tolerance and safety.

Much depends upon the proper nourishment of the patient, for, if this be neglected, medical treatment, however rational, will most probably prove a failure, as the fever will continue far beyond its natural duration, or the patient will succumb to the combined influence of the fever and inanition.

THE FEEDING OF INFANTS.[1]

BY HENRY L. COIT, M. D.,

NEWARK, N. J.

The unretarded growth of the infant during the first year of its independent life is beset with difficulties which hitherto have well-nigh baffled the efforts of physicians. Of the four thousand deaths occurring in Newark, N. J., last year, more than twenty-five per cent. were of children under the age of one year; being about one-fifth of all who were born.

This enormous mortality, which exceeds that of any other period of life, is suggestive of sad defects in our knowledge of the means for the care and protection of the young. These facts are a greater reflection upon our intelligence, when we consider that among none of the lower mammals do we find the young dying in such large numbers.

In the mind of the profession at large there is a wide diversity of opinion concerning the methods to be employed in the dietic management of children at this early period of life. So vague and contrary are the views held on this subject, that even scientific observers, who agree on other points, are at variance in regard to it.

We find, also, that the subject of infant feeding is viewed from different standpoints, not only by physicians, but by the chemist, the dairyman, and the mother; and it is not strange, therefore, that the physician should find himself in conflict with one or another of these, who, by reason of their limited knowledge, fail to apprehend the truths which lie beyond the range of their immediate vision.

This general want of agreement on a question of such vital importance, is a sufficient warrant for any attempt to harmonize the discordant elements; and also for any effort to establish a more rational basis for our methods.

Nature has provided a food for the first year of human life, in the normal secretion of the mother's breast; and in a manner which renders it impossible to improve either the food or the method of feeding. It is perfect in its composition, digestibility and temperature; and if it is true that nature makes no mistakes, except as we pervert her laws and turn aside her efforts in wrong channels, then it would follow, that where physical health exists in the mother, the lacteal secretion will always agree with her child, and conduce to the most perfect development.

In studying the composition of woman's milk, it is important to bear in mind some of the principles of nutrition. Bodily growth or repair in the adult seems to maintain an even balance with the destructive waste of oxidation; with advancing age this equilibrium is lost, because of weakened assimilation, and consequent mal-nutrition. In the infant, on the other hand, an entirely different state of things exists: here we find a maximum of activity in the digestive and assimilative functions, with a minimum of waste, so that we have increased and rapid development.

In woman's milk are found all the elements of the more highly organized vegetable and animal foods: the proteids, which are the casein and albumin; the carbohydrates, which are supplied in the lactose; the fats, which are the most complicated constituents of milk; the mineral salts and water. In estimating the relative importance of these principles it is well to know that the dynamic value, which is manifested through nerve force and involuntary vital action, is generated from the proteids and fats; that the calorific properties, which regulate the thermal units of the body, reside in and result from the decomposition of the carbohydrates; and that the albuminoids also are supposed to have an intimate relation to the formation of adipose tissue.

Many chemists have undertaken the analy-

[1] Read at a meeting of The Practitioners' Club, Newark, N. J.

sis of human milk, and there are many differences in their results; the subject is one around which there are many difficulties, especially in the determination of the albuminoids and fats. Dr. Arthur V. Meigs, of Philadelphia, has written a long monograph defending the statement that woman's milk contains only about one per cent. of casein, whereas Professor Leeds finds a much higher percentage, namely, from two to three. Foreign chemists have generally reported from three to five per cent. of these principles. These differences are probably due to the imperfect methods of determination. I am of the opinion that casein in woman's milk is not a constant quantity during the whole period of lactation, and I am supported in this view by the experimental observations of Simon, who, after making many exhaustive analyses of woman's milk at different periods of lactation, concludes: first, that the quantity of casein is at its minimum at the commencement; it then rises considerably and ultimately attains a fixed proportion in the later part of lactation. My own observations have led me to believe that since the proteids are important factors in the early development of the child, nature provides these compounds in a proportion exactly suited to the peptic power of the child's stomach; just as the full digestive capacity is supplied with other constituents of the food. In this connection I would call attention to the fact that several years ago Dr. Henry A. Mott, of New York, during the analysis of many samples of milk from Caucasian and African women, found that in the latter the albuminoids were uniformly in excess, and in this respect as well as in the other features of specific gravity, color and general appearance, resembled cow's milk.

In fat principles the average woman's milk is not widely different from cow's milk, containing as it does about four per cent. of fat, which, however, consists chiefly of the more stable fatty compounds, namely, olein, palmatin and stearin; together with these are found a very small percentage of the volatile fatty compounds, among which are butyrin, caproin, etc. This minimum of volatile fats in human milk is due to a mixed diet, whereas milk of the lower animals, which are exclusively herbivorous, yield a lower percentage of the unstable and deleterious principles, which accounts for the distinctly acid reaction of such milk.

In woman's milk we find a much higher percentage of carbohydrates than is found in that of the lower animals, except perhaps the mare or goat. Chemists are generally agreed that seven per cent. represents the average quantity, which is reasonably constant. This principle, lactose, being a sugar of animal origin, has some distinctive properties. In the stomach a portion of it is readily changed into lactic acid, which plays an important part in the digestion of the albuminoids; this is well to remember when we have to use sugar in a food mixture. Unlike cane sugar, milk sugar does not readily take on the alcoholic or the butyric fermentation. Of the mineral salts and water nothing need be said except that both are necessary to the building of the tissues, and, being inorganic compounds, are not liable to change.

It would seem unnecessary to defend this common food for infants; and yet we are forced to do this by the fact that a large proportion of the mothers of to-day are either unable or unwilling to nourish their young. Among the causes which have determined this unfortunate condition of the race are, the injurious effects of modern social life, and a desire to escape responsibility and trouble; yet it is safe to assume that this deplorable state of things would not exist, at least not to so great an extent, had not the confidence of the public and a large part of the profession, been established in the numerous manufactured substitutes for mother's milk. The nursing-bottle was once unknown, and that within the recollection of most of those who now use them. Until within a few years this expedient was regarded simply as an economical substitute for the foster-mother; but now both she and the natural mother are relegated to other fields of action.

In judging of the merits or demerits of substitute foods, new combinations of which are brought daily to our doors, it might be well to lay down a principle to guide us, namely: Any food for infants under one year old, that departs in constitution from the character and proportion of proximate elements found in woman's milk, is not only to be regarded with suspicion, but discarded as likely to be detrimental to the child, and will in all probability defeat the purposes of nutrition.

We are indebted to Dr. T. M. Rotch, of Boston, for an exhaustive treatise on manufactured infant foods, in his valuable article on infant feeding in Keating's encyclopædia.

Here we are told that almost every manufacturer has made claims which he cannot substantiate, and after a careful and impartial study of their analyses we find in them all, without exception, faults, either in the percentage of essential ingredients, or in the addition of foreign substances which were never designed for the infant's stomach. The apparent success of some of these preparations has been due in part to advertising; but largely, I think, to a general misapprehension of the causes of failure with cow's milk. It is a common practice when cow's milk does not agree on the first trial, to resort at once to a patent mixture, and then in the event of failure, to change from one to another in sheer despair, until finally the infant, if not already dead, is imperfectly nourished and enters childhood with weakened digestive powers.

Cow's milk has been used as a substitute for mother's milk from the time when it first became necessary to nourish infants by hand. That this substance is the one best adapted to our purpose is conceded by all but a remnant of the profession, and yet the fact that very many physicians recommend patented mixtures is evidence that in resorting to these expedients they have not intelligently studied the relations of cow's milk to the infant's digestion.

In order best to understand the causes of failure, we will consider the comparative composition of woman's and cow's milk. The gross quantitative analysis will teach us much in this direction. The total solids are about the same in each, namely, twelve per cent., so that the difference lies in the unequal proportions of the same ingredients. The following table of percentages will show approximately how average cow's milk may be brought by synthetical adjustment to correspond to woman's milk:

Woman's Milk.		Cow's Milk.	
Casein	2	Casein	4
Milk Fat	4	Milk Fat	4
Milk Sugar	7	Milk Sugar	4
Water and Salts	87	Water and Salts	88

Modified Cow's Milk.

Cow's Milk + equal bulk spring water	= 2	Casein	2
		Milk Fat	2
		Milk Sugar	2
		Water	94

If to half of this we add

Milk Fat	2	we will obtain almost exactly	Casein	2
Milk Sugar	5		Milk Fat	4
			Milk Sugar	7
			Water and Salts	87

We find then that cow's milk contains twice as much casein as woman's milk, and on the other hand woman's milk contains nearly twice as much sugar as cow's milk, the fat being about the same in each. Judging from these differences, it is apparent that ill success with the latter milk is largely due to our failure to adjust the disproportion in its several constituents.

The sources of cow's milk, and the dangers through which it passes in being brought to us, are divisions of this subject too large to be fully treated in this paper. Strict sanitary control of the milk supply will be necessary before we shall remove these sources of danger, and before we may hope to improve the present defective dairy-farming.

Among the disadvantages in the use of cow's milk are its contaminations. First, we have the transmitted foreign matters, such as the tubercle bacillus, which, according to Ernst, may be brought to us from cows which have no localized tubercular deposits in the udder; notwithstanding the fact that absence of local disease has been supposed by Koch and others to render the milk inocuous. This fact alone would justify the sterilization of all milk given to infants. Then we find the bacteria which determine the various fermentations and the putrefaction of milk, which are inevitable in all milk that is exposed to the air, and only await the favorable external conditions to spoil it. We have also the typhoid bacillus, found in milk which has been carried in containers washed with contaminated well water. There are also, in much of the cow's milk, abnormal constituents in the excess of volatile fatty compounds, which are easily changed into acids; chief among these is caproic acid, which is produced, together with other volatile acids of the fatty series, by the oxidation of albuminous substances used for food. We find beside these, various chemicals which are added for commercial purposes, such as the nitrates, used to destroy the garlicky odor of a turnip diet, and which produces in milk a chemical compound isomeric with nitroglycerin. Water is the least dangerous of all injurious additions, unless it be added indirectly, by feeding cows so as to increase their thirst and consequently their milking capacity. Milk so watered has a low specific gravity and carries with it deleterious principles.

Poisonous substances are found in milk which has been improperly handled; of these tyrotoxicon is best known, being described by Vaughan. It is a poisonous ptomaine

occurring in milk which has been allowed to stand long in an excessively acid condition. There is, no doubt, some causative relation between the improper feeding of cows and this poison. If a diet rich in albumin and devoid of starch (beer-grains) produces an increase in the fatty acids, and by the development of "bacillus proteus" rapid putrefactive changes are determined, it is highly probable that poisonous ptomaines would be produced.

There are small dairies in the suburbs of the larger towns and cities, where an almost exclusive diet of beer-grains is used, and the milk thus produced is sold to small consumers. The present low price paid by middlemen to the producer, namely, one and a half to two cents per quart, renders it imperative that the latter should find cheap food for his cattle, that which will determine the largest output of milk. Thus, resource is had to brewery waste, cheap roots, etc., instead of the solid grains of feed, with clover and timothy hay for fodder.

Beer-grain is, perhaps, more generally used than any other of the cheap foods. If the dairy district happens to be at a distance from a brewery, some of the farmers store it in earth cellars for the winter; this storage is begun in June when the price reaches the low figure of three dollars per ton. Being a waste by-product in the manufacture of ale and beer, it consists chiefly of the gluten of the barley, with its cellulose. The seventy per cent. of starch, sugar, dextrin, etc., have been removed, leaving nothing of a nutritive value but the thirteen per cent. of proteids. It is wet when sold, easily undergoes fermentation, and is often given to cows in this condition. Town dairymen obtain it fresh, but this advantage is offset by the larger quantities used. It is the testimony of the better class of dairymen that the feeding of this refuse destroys the cows' digestion in about seven years, and renders them unfit for further milking.

It is fortunate, however, that reliable sources of milk are not wanting; I have frequently examined samples of milk from reputable dairies in our own State, at a time of year when pasture was no longer to be had; and I have always found them above the standards of purity as set by health boards. Such sources should be diligently sought and encouraged.

The old method of diluting cow's milk with water, and gradually increasing the milk with the advancing age of the infant, from one-third to two-thirds, is familiar to every physician. The defects of this mixture are evident in the shortage of sugar and the low percentage of fat. Dr. William Pepper has long added cream to this diluted milk, with from five to six drachms of sugar of milk to the pint; boiling the mixture when found to disagree. The labors of Dr. Arthur V. Meigs have resulted in great advance in our knowledge of this subject. His experimental observations and clinical experience combine to command the attention of every thoughtful physician; nevertheless, his claim that mother's milk does not (and, consequently, any mixture should not) contain more than about one per cent. of casein, is accepted with varying degrees of confidence by the profession. While my own experimental observations have been limited, yet by my clinical experience I am forced to the conclusion that this estimate is too low; except it be in the early part of lactation. My own practice has been, when a milk mixture was required, to gradually increase the albuminoids to the maximum of the infant's peptic power, and I am convinced that I have thus obtained more efficient nerve power, more vigorous nutrition and a greater resistance to disease, than where mixtures containing only one per cent. of casein were employed without change.

Various mixtures have been devised from time to time with cow's milk as a base; but it remained for Dr. J. F. Meigs to add cream and milk sugar to diluted and alkalinized cow's milk, with the object of adjusting the proportions to correspond to that of the woman. The mixture resulting from his practical experience, and perfected later by Dr. A. V. Meigs, has been on trial for several years. There can be but little objection to this combination on the ground of faulty constitution, but we have found some difficulties in the way of its practicability. The cream to be added is supposed to contain a definite percentage of fat, namely, from fourteen to sixteen. In the country, it would be difficult to determine for many cases the amount of fat contained in a given sample of cream; and in the cities it is not easy to obtain cream at any price. The milkmen object when asked to bring it, on the ground that they do not skim their milk, and when it is obtainable from them it has a varying and always unknown percentage of fat. Another, though minor, objection to the above mixture, is its distinct alkalinity. In my judgment twenty-five per cent.

of lime water is too much. This quantity would only be called for when using a distinctly acid milk, such as is sometimes sold; but when the milk is brought from cows which are properly fed it is not nearly so acid and does not require this treatment.

The recommended mixture of Dr. T. M. Rotch, which is constructed on the same plan as the Meigs' mixture, is open to the same criticism so far as the cream is concerned. The twenty per cent. centrifugal cream of this author which may be obtained in cities is not easy to get in other quarters.

The mode of measuring the sugar in both of these mixures is often found impracticable, in that the quantity required is determined with a measure of weight.

Meigs' modified mixture, suggested at the recent meeting of the American Pediatric Society, is intended to simplify the work of preparation, and it does this effectually. Fresh milk is allowed to stand in a tall vessel for three hours. The top half containing cream is poured off and put aside for use. Sugar water is made by dissolving eighteen drachms of milk sugar in a pint of water. In preparing a four-ounce feeding, three tablespoonfuls each of the top milk and lime water are mixed together, and to this is added two tablespoonfuls of sugar water. It might be urged as an objection, that the mode of adjusting the fat in this mixture is somewhat uncertain. The raising of cream is determined by several variable conditions, and I think three hours is hardly sufficient time to allow all the fat to collect in the upper portion of milk when placed in a tall vessel. However, this mixture is of great utility. I have found it very useful when beginning the proper treatment of ill-fed infants, where a more perfect adjustment could not be carried out.

As milk is the only food which may be taken with advantage during the greater part of the first year, and since in this period the average infant will consume nearly five hundred quarts, it becomes important that we should lay hold of every expedient designed to aid us in perfecting our methods of preparation. The conditions required in order that we may reach this desideratum, are,

First. The uniform purity of materials and the ability to obtain them.

Second. Simplicity of preparation.

Third. Flexibility of formulæ.

Fourth. Moderate cost of the food.

Fifth. Its preservation.

The uniform purity of materials is the first essential requisite to success. By enlisting the interest and co-operation of honest dairymen, we will find little difficulty in getting milk, even in winter, which will have from twelve to fourteen per cent. of solids and a specific gravity of 1.032. Milk, whether from winter-fed or pastured cattle, should not vary more than one or two points on the lactometer.

The milk for our purpose should not be the same as that intended for butter making; for it is possible to feed cows, according to Brush, so that the fat is increased from the normal standard of four to seven per cent. Therefore, it does not follow that the richer the milk in cream the greater its value for infant feeding. It is of equal importance that the cream with which we supplement our mixtures should be constant. It has been the custom to depend on the supply from various commercial sources. Would it not be better if this added cream were taken from the same milk as that which we employ? This leads us to consider how best we may obtain it. Cream is used for the purpose of restoring the fat which is lost by diluting the cow's milk. Since it is true that woman's and cow's milk contain nearly equal proportions of fat, it is then obvious that our finished mixture should contain exactly as much cream as an equal bulk of undiluted milk. The most convenient and accurate means of replacing this important principle is to set aside enough milk the previous day to correspond to the total amount of water used, and collecting the cream add it to our mixture. For example, if our finished food measures thirty ounces, and is one-third milk and two-thirds sugar water and lime water, then we should add to it the cream from twenty ounces of milk. Another important advantage in this method is that we may raise or lower the cream at will, without materially affecting the bulk of the finished preparation.

The manufacture of milk sugar is now an industry of considerable importance, and its source renders it possible to insure equal purity with that of cane sugar.

Pure water is also an essential feature in the object to be attained; as a rule, it will be found possible to obtain spring water, which, being free from organic impurities, is to be preferred. It has also the advantage of holding a uniform percentage of mineral constituents, which is not true of boiled and variously concentrated river water.

The second requirement is that the prep-

aration of the food shall be rendered simple and easy. Under this heading would occur many minor details, the more important of which may be mentioned. The physician should always determine the proportion of ingredients for each case and write out a formula to serve as a guide to the attendant. The preparation at once of the amount to be used in twenty-four hours is preferable to the making of each feeding separately. The total number of ingredients in any possible modification of the mixture are five; and it is a significant fact that they correspond exactly in number to the elementary principles of the most highly organized foods. They are milk, cream, milk sugar, water, and lime water. The first two should always be mixed together thoroughly, the second two should be made in solution by heat and then added to the former, the lime water being kept aside and added to each separate portion just before feeding, in the proportion of one-fifth of its bulk. The reason for this last precaution is apparent when we remember that heating the lime water deposits a portion of the lime. Lime water is a saturated solution of lime and most saturated when made cold, holding only ten grains of lime to the pint. The sugar required for any formula can most easily be measured with an ordinary boxwood seidlitz powder measure, which may be purchased for a few cents of any druggist. The amount of sugar required in order to bring it up in a mixture to seven per cent. may be easily determined by a simple rule-of-three calculation, remembering that cow's milk contains about four per cent. of sugar, and that a pint of water contains seven thousand grains. The result in grains, divided by the capacity in grains of the seidlitz measure, will give the number of measurefuls required by the formula.

Experience has taught us that no inflexible rule can be followed in adjusting the proportion of ingredients. If an analysis of the mother's milk could always be made prior to the preparation of a substitute mixture, we would find that nature provides a food, variable in its composition yet exactly suited to the special requirements of the individual. This is well proven by the analyses of human milk already made, all of which seem to differ in some particular.

It becomes necessary, then, to adapt the substitute to a great variety of food capacities, and to as many degrees of digestive power. The sound judgment of the physician will be the safest guide as to the relative proportion of ingredients required by individual cases. We have found the plan so long in vogue, of using one-third, then one-half, and lastly two-thirds milk, a good general rule in determining the amount of casein for a given mixture. This allows of changes at the will and discretion of the attendant; for when the milk is reduced the water is increased; and when the total quantity is increased the proportion of milk and diluents may still be preserved.

As a rule, it will be found that the food may contain milk in the proportion of one-third during the first three months, one-half during the next six months and two-thirds during the last three months of the first year.

My own experience has led me to adopt the following general plan as a guide in fixing the amount of food which may be taken:

1st week, 10 feedings of 1 to 1½ ounces each.

2d and 3d week, 9 feedings of 1½ to 2 ounces each.

4th week, 8 feedings of 2 to 2½ ounces each.

2d and 3d month, 7 feedings of 2½ to 3½ ounces each.

4th and 5th month, 6 feedings of 4½ to 5½ ounces each.

6th and 7th month, 6 feedings of 5½ to 6½ ounces each.

8th and 9th month, 5 feedings of 7 to 8 ounces each.

9th to 12th month, 5 feedings of 8 to 10 ounces each.

The question of cost is one of importance to the larger part of those who are concerned. In popularizing our improved methods, they must be shown to be at least no more expensive than others; and it is a fortunate provision in this, as in other matters concerning our welfare, which makes the best the cheapest. Careful calculation will reveal the fact that the average cost of these milk mixtures is about twelve cents per day.

Sterilization is the capstone of this important column. To this do we owe our ability to preserve the infant's food against the numerous destructive agents which abound on every hand. Thoughtful men have for years baked the nursing bottles which were plugged with cotton; others filling them with boiled food have corked and inverted them. Boiling is a simple means of rendering milk sterile; but the temperature required, which is considerably

above the boiling point of water, seems to disintegrate the fats. The atmosphere of live steam, which has a temperature of 212° F. is preferable if it can be made to permeate the flasks and the mixture contained therein. Milk subjected for a long time to this temperature, does not acquire the odor or taste of boiled milk; nor does there seem to be any change in fats or casein.

Several appliances have been devised for the sterilizer. A simple steamer, which may be constructed by any tinsmith, will answer the purpose. A suitable size is one having a depth of thirteen inches and a diameter of nine inches, with an inward flange four inches from the bottom, upon which rests a movable and perforated false bottom. The cover should be loosely fitted, and have a small vent tube running through the handle. For containers in which the separate feedings are sterilized and kept until wanted, I have used chemical flasks (No. 2000) made by Whitehall, Tatum & Co. They are of thin annealed glass, and the steam heat readily permeates them; they are easily cleaned, and in this respect are better that the Erlenmyer flasks recommended by others. The neck being longer the cotton plug is also more easily retained. In order to complete the sterilizing process, it is necessary that the milk should be prepared in bulk and divided in equal portions, so that no two feedings shall be exposed to the air at the same time. These are measured into the flasks, which are afterwards tightly closed with absorbent cotton. They are now placed on the steamer on the perforated false bottom, the water in the lower chamber being kept in a state of ebullition for forty-five minutes. This will be sufficient to destroy all pathogenic bacteria, protect the milk from the causes of fermentation, and insure its preservation for a larger time than is required.

To recapitulate, we have before us a subject, which, though viewed from various standpoints, has recently been given a scientific aspect. Through the slow process of experience, together with the precepts of careful observers, we have been able finally to establish a rational basis for our methods. That cow's milk when modified to correspond to woman's milk is the best substitute, we think is proved beyond question; and also that milk mixtures so constructed as to fulfill the requirements of purity, simplicity, flexibility and moderate cost give us when properly preserved the nearest approach to the food which nature has provided for the infant.

63 New Street.

SOCIETY REPORTS.

AMERICAN MEDICAL ASSOCIATION.

Forty-first Annual Meeting, at Nashville, Tenn., May 20–23, 1890.

Second Day, Wednesday, May 21.

In the Section on Practice of Medicine DR. GEORGE FACKLER, of Cincinnati, read a paper on

Calomel as a Diuretic.

He related the history of three cases of heart disease attended by œdema in which calomel, in doses of about four grains three times daily, usually continued four days or longer, caused decided polyuria and disappearance of ascites and œdema. In most of these cases digitalis and other of the older diuretics had failed. In a fourth case, in which the cardiac trouble was far advanced, calomel also failed to act as a diuretic. The drug, when administered in this manner, caused slight, sometimes severe, salivation and stomatis. He thinks that calomel, and, in all probability, other mercurial compounds, possess diuretic action. If given in proper doses the effect of calomel becomes evident from the second to the tenth day. Continuation of the treatment during diuresis will not alter or increase the effect. Its action is most marked in dropsies due to heart disease; in dropsies of hepatic origin it is not to be relied upon. Pathological changes in the kidney interfere with its action. Small doses are of no use. The diuretic action, in all probability, is due to the irritating effect which mercury exercises during elimination upon the renal epithelium.

Continued Fevers of the South.

An interesting discussion on the fevers of the South was opened by DR. W. W. JOHNSON, of Washington, in a paper read by the secretary.

He thinks that enteric fever is a rare disease in the South in the typical or intense

form. There is probably a change going on in the form of enteric fever in the South which has lessened its typical character, so that it is becoming milder. Many cases of mild continued fever which had no well-defined course or symptoms are cases of mild enteric fever, erroneously diagnosticated at times as malarial and intermittent fever. Dr. Johnson thinks there is no good reason to believe there is such a disease as typho-malarial fever.

Dr. George Dock, of Galveston, said that a combination of typhoid and malarial fever has been demonstrated. In Texas, however, they never speak of typho-malarial fever, but they have a continued fever which is commonly spoken of as catarrhal, and the question has been discussed among them whether they have to deal with typhoid fever or a catarrhal fever. As to the latter, there have been no autopsies to show its pathology out of the many cases in which it was said to have been the cause of death. His own opinion is that such cases are usually enteric, though not running a typical course. In half a dozen cases he had verified this view by an autopsy, at which the essential lesions of typhoid were found in the intestines. Those who hold to the separate nature of catarrhal fever adopt a different treatment, giving heroic doses of antipyrine, such as one hundred and fifteen grains three times a day. (!)

Dr. Sears said he had been practicing thirty-five years in Texas, and had there seldom seen typical typhoid fever. But he had treated a large number of cases of continued fever which he had no hesitation in pronouncing purely malarial. They had the mixed types of remittent, intermittent and continued malarial fevers. These fevers, if continued sufficiently long, might take on the typhoid state, as might pneumonia and other affections, especially when badly managed, but it was not really typhoid. The patient should take quinine, and although he did not claim that this drug cured, it did prevent fatal consequences. The recovery might be abrupt or gradual.

A variety of opinions were expressed and the subject was by no means finally settled.

In the Obstetric Section, Dr. W. W. Potter, of Buffalo, presented his

President's Address.

He gave some new ideas as to how the Section should be conducted. He advised that the secretary be elected for a longer time than one year, as in that time a secretary learns only how to be of service and become acquainted with the members. He would have an assistant secretary elected each year, probably from the place of meeting. He urged a prompt and full report of the proceedings of the Section in pamphlet form. He advised the securing of a stenographer. He also thought there should be a vice-chairman elected to fill the place of the chairman in case of unavoidable absence.

He then advocated strict antisepsis in labor, and discussed the traction forceps. He thinks these serviceable in some cases and not to be so sweepingly condemned as on their first appearance. Their assistance often enables one to save both mother and child, as where impaction of the head is accompanied by uterine inertia.

Dr. Franklin H. Martin, of Chicago, read a paper on

Early Vaginal Hysterectomy for Cancer of the Uterus.

He had collected one hundred and thirty-four cases which had been performed since January 1, 1885, with the idea of getting at the future immediate mortality of this operation. The mortality was less than fifteen per cent. Of 25 operations, 4 had been operated on but once; 3, twice; 2, three times; 3, four times; 5, five times; 1, eight times; 1, twelve times; 1, thirteen times, and 1, twenty times. The average mortality of operators having the largest number of cases was but ten per cent. He thinks that vaginal hysterectomy is the most justifiable surgical procedure for cancer of the uterus, and should be attempted at the earliest possible moment after the disease is diagnosticated; because it will remove the entire disease in cancer of any portion of the uterus in a greater proportion of cases than any other surgical procedure now recommended, and will enable the operator to go farther beyond the diseased tissue into healthy tissue than any other surgical procedure. It also leaves the remaining tissues in a less favorable condition for return of the disease than will any other operation. Dr. Martin thinks that vaginal hysterectomy for cancer of the uterus will, in the future, give an immediate mortality among general operators of not more than ten per cent. In the hands of experts this will not exceed five per cent.

Third Day, May 22.

After the meeting was called to order, Dr. Eugene Griscom, Chairman of the Nominating Committee, submitted the following report of the names of the persons nominated by the Committee on Nominations to fill the various offices in the Association for the ensuing year: *President*, W. T. Briggs, M. D., Tennessee; *First Vice-President*, C. A. Lindley, M. D., Connecticut; *Second Vice-President*, R. C. Moore, M. D., Nebraska; *Third Vice-President*, H. C. Wyman, M. D., Michigan; *Fourth Vice-President*, L. P. Gibson, M. D., Arkansas; *Treasurer*, R. J. Dunglison, M. D., Pennsylvania; *Permanent Secretary*, W. B. Atkinson, M. D., Pennsylvania; *Librarian*, C. L. Richardson, M. D., District of Columbia; *Trustees of Journal*, J. B. Hamilton, M. D., District of Columbia; J. V. Shoemaker, M. D., Pennsylvania; D. E. Nelson, M. D., Tennessee. *Judicial Council*, X. C. Scott, M. D., Ohio; W. F. Peck, M. D., Iowa; J. A. Lane, M. D., Kansas; J. H. Murphy, M. D., Minnesota; J. J. Happel, M. D., Tennessee; D. J. Roberts, M. D., Tennessee; A. Garcelon, M. D., Maine.

San Francisco, California, was chosen by the committee as the place of next meeting. Date, first Tuesday in May, 1891. E. L. Shurley, M. D., of Michigan, was appointed to give the Address on General Medicine. Joseph M. Mathews, M. D., of Kentucky, Address on General Surgery. W. L. Schenck, M. D., of Kansas, Address on State Medicine.

The Convention adopted the report of the committee, substituting, however, Washington, District of Columbia, for San Francisco, California, as the place of meeting in 1891. Dr. W. C. Patterson, M. D., was appointed chairman, and C. H. A. Kleinschmidt, M. D., secretary of the local committee.

Dr. Samuel Logan, of New Orleans, then read the

Address on General Surgery,

in which a very careful synopsis of recent progress in surgery was given. The speaker summarized the conclusions of the famous Hyderabad Chloroform Commission, and contrasted with their results the findings of Dr. H. C. Wood and Dr. H. A. Hare, both of Philadelphia. He particularly cautioned against giving chloroform vapor in concentrated form, and against continuing the administration where there is the slightest embarrassment in breathing. Gradual introduction of the vapor is the golden rule in using this agent. Local anæsthesia was briefly discussed, then antiseptics, particular attention being given to Lister's double cyanide gauze. The dry method of wound treatment was advocated on the ground that prompt primary union followed in all suitable cases; drainage was advocated only when the surgeon could not be sure that the wound was aseptic. In cerebral surgery the speaker was greatly influenced by von Bergmann's valuable monograph upon this subject. Abdominal surgery was dwelt upon at length.

Address on Dietetics.

Dr. E. A. Wood, Chairman of the Committee on Dietetics, then delivered the address on Dietetics. He pointed out the evil results which follow the unguided administration of food to children. The jaws and teeth of children should receive their proper exercise, in order that they may attain their proper development. Starch foods washed into the stomach without admixture with saliva are not digested. The average child fed on firm food requiring mastication will grow up with strong, square jaws, and will become a vigorous and well-developed adult.

A report followed from the Committee on American Colleges, advising preliminary examinations for admission to medical schools, annual examinations, and a three years' course.

In the Section of Diseases of Children Dr. W. L. Stowell, of New York, read a paper on

High Temperature in Children,

in which the speaker said that the child's temperature is normally higher than that of the adult. The temperature may be very high from apparently trifling causes, usually nervous impressions or reflex disturbance. All the febrile diseases have what might be called their normal range of temperature, and it does not indicate treatment unless excessive or out of its normal course. Antipyretics are to be used with caution, lest while they lessen fever they, by weakening the heart, lessen the chance of favorable termination of the disease. The temperature may often be lessened indirectly by heart tonics, general tonics and food. The tendency of nutrition in childhood is towards growth and repair, not degeneration, hence

careful nursing and feeding will do more towards a favorable result than drugs.

Duality of Croup and Diphtheria.

Dr. Carl Seiler, of Philadelphia, in opening the discussion on the duality of croup and diphtheria, said that in his belief they were certainly different diseases. In diphtheria there is always a peculiar characteristic odor about the body and a marked difference between the membrane found in the two states. Again, diphtheria comes suddenly, while croup develops slowly. The poison of diphtheria varies very much in its effects in children of the same family sick at the same time.

The discussion was continued by Dr. Porter, of St. Louis, and Dr. Jackson, of Syracuse. Dr. E. R. Early then read a paper on "Croup," in which he gave the history, clinical features and treatment of the disease.

In the Section of Practice of Medicine, Materia Medica, and Physiology, a number of papers were read by title, after which Dr. J. M. French, of Cincinnati, Ohio, read a paper on "Oxygen; its True Value as a Therapeutic Agent." Dr. E. L. Shurley, of Detroit, Mich., then read a paper on "The Local Treatment of Phthisis Pulmonalis," in which he advocated the local use of creasote by a modification of insufflation and forced inspiration. Dr. W. B. Davis, of Cincinnati, read a paper entitled, "Functional Albuminuria."

PERISCOPE.

A Case of Tetanus. Recovery.

The following case of tetanus, followed by recovery, is reported by Dr. George H. Stroup, in the *University Medical Magazine*, Feb. 1, 1890: John R., 31 years old, colored, coachman, while walking over some old lumber accidentally fell on a projecting nail which entered the knee at outer side of right patella, to the depth of an inch. He pulled it out immediately, and thought little of the occurrence until five days after, November 2, 1889, when he experienced peculiar pains and hardness of the muscles of his back, also stiffness of the neck, a contraction of the facial muscles and a staggering gait.

About 8 o'clock the same evening Dr. Stroup was summoned very hastily to see the man, and found him in all the agonies of tetanus: jaws locked, muscles stiff, back arched, the whole body rigid, and with great drops of perspiration on his face and neck. Dr. Stroup immediately ordered a tub, hot water, blankets, and a clothes-horse, over which the blankets were placed. With considerable difficulty he was stood in the tub while the hot water was poured over him. After one hour and thirty minutes of this steaming treatment he regained some control over his muscles, and asked to be let out. The muscles appeared to be relaxing, and he was able to bend the knee down into the tub. Fifteen minutes later 30 grains of bromide, with 10 drops of chloroform were forced into his mouth; in 20 minutes he cried to be let out. Thirty grains more of bromide with 15 drops of ether were given. The steam and heat under the blankets were by this time intense, and, as the patient seemed to be about fainting, he was taken out and given 30 grains more of bromide with 20 grains of chloral. He was then wrapped in blankets and put to bed.

Dr. Stroup did not leave him until midnight. At one o'clock he was again summoned. The muscles were twitching, and stiffness of the jaws again commencing. Sixty grains of bromide with 20 grains of chloral were immediately given; in half an hour he was alseep, and did not awake until 5 o'clock Sunday morning. On waking he could open his mouth sufficiently to say he had pain at the knee and stiffness in his jaw. Some milk and beef tea was given. As he had intense craving for water, he was given some in a glass; he had no sooner swallowed it than the convulsive movements commenced again; this occurred every time water was taken. Chicken broth was then prepared, but it acted in the same way as the water. Milk and beef juice were all he could take without producing convulsions. A small piece of meat was put into his mouth but he could not close the jaws to chew it.

About 3 P. M., November 3, Dr. Stroup was again summoned. The messenger said he was dying, and on arriving at his room he was found to be suffering from all the acute symptoms first described, and was evidently dying. A hypodermic injection of morphia and cocaine was given at once, one-half grain of each. As this appeared to do very little good, in half an hour two more doses of one-quarter grain each were ad-

ministered in succession. In about twenty minutes, seeing very little effect from the injections, and thinking he must surely die, Dr. Stroup plunged a tenotomy knife into the cicatrix where the nail had entered, cutting down deeply. He had no sooner withdrawn the blade than the muscles, which were so rigid that five men who were assisting could not bend the arm or leg, almost immediately relaxed, and the patient cried: "Oh, Doctor, don't!" The wound made by the knife was filled with iodoform and the leg bandaged.

From this time to the end of the first week there was considerable stiffness of the jaw with pain at the knee, the pain gradually passing down the leg to the great toe, after which it disappeared entirely.

During this first week the patient took daily 120 grains of bromide with the same amount of chloral; at the end of the second week he was out of bed, and by the end of the third week was walking about. His subsequent recovery was complete.

Powdered Meat.

As long ago as 1874, Dannecy, Chief Pharmacist of the hospitals of Bordeaux, prepared an excellent article of food for invalids by making a powder of meat. He took meat, chopped it very fine, and spread it upon muslin, drying it by means of a current of air. In this way he obtained a friable mass, which was easily powdered. It was administered by adding it to beef tea or spreading it upon bread. It could also be mixed with the ingredients used for making biscuits, and this combination was found to be especially suitable for administration to children.

In the same year Yvon suggested the following method of preparing a palatable meat food: Take of raw meat (filet of beef), 250 parts; of charred sweet almonds, 75 parts; of bitter almonds, 50 parts; of white sugar, 80 parts. Rub slowly in a mortar until a homogeneous paste is obtained, adding from time to time a sufficient quantity of water to give a proper consistency for a semi-solid or a liquid mixture. In the liquid preparation the meat will settle after awhile, but may be dispersed through it by shaking. The preparation may be preserved for a long time if bottled and kept in a cool place; and its nutritious character may be enhanced by adding to it the yolks of one or more eggs.

Cremation in California.

Dr. Walter Lindley, of Los Angeles, in his opening address before the Medical Society of the State of California, says that there appears to be a general revival of cremation as a method for the disposal of the dead. The Cremation Society of Southern California was incorporated about three years ago. Its building consists of a neat chapel, connected with the furnace-room by a large sliding door. The main object of the Society has been to furnish a quick and powerful heat, without allowing the flames to come in contact with the body. No direct currents of air pass over it; the heat is still and of a temperature of about 2,000° F., doing its work in less than an hour, and permitting none of the essential particles to escape. No other crematory exists west of the city of St. Louis. The Society has had about thirty cremations, all of which are said to have been highly satisfactory in their methods and results. While Dr. Lindley does not see any imperative reason at present for adopting this method, yet, as our land becomes more densely populated, it will become incumbent upon us, as a profession, to lead the way — for sanitary reasons — to some method of disposing of the dead, different from the present method of sepulture.—*Occidental Med. Times*, May, 1890.

A Long Fall.

A remarkable fall of a miner down 100 metres of shaft (about 333 feet) without being killed, is recorded by M. Reumeaux in the *Bulletin de l' Industrie Minérale*. While working with his brother in a gallery which issued on the shaft, the man forgot the direction in which he was pushing the truck: so it went over, and he after it, falling into some mud with about three inches of water. As stated in *Nature*, he seems neither to have struck any of the wood *débris*, nor the sides of the shaft, and he showed no contusions when he was helped out by his brother after about ten minutes. He could not, however, recall any of his impressions during the fall. The velocity on reaching the bottom would be about 140 feet, and time of fall 4.12 seconds; but it is thought it must have taken longer. It appears strange that he should have escaped simple suffocation and loss of consciousness during a time sufficient for the water to have drowned him.—*Science*, April 11, 1890.

The "Lancashire Cure" for Hydrophobia.

A curious instance of the readiness of the lay mind to accept statements on the efficacy of methods of treatment without the necessary support of scientific evidence has just been shown in the resolution of the Rabies Order Committee of the Heywood Town Council to recommend the council to grant a testimonial under the corporation seal to the owner of a secret "cure for hydrophobia." It appears that last November five persons in Heywood were badly bitten by an alleged mad dog, and were treated by this "cure" on the recommendation of the chief constable of Clitheroe. The statement was made that the remedy had been in existence for over 100 years, a writer in the *Gentleman's Magazine* in 1783 saying that 400 cases had been successfully treated by it. Since then it was said "that 600 more cases had been treated, and not a single failure." As everything, of course, turns upon the actual rabidity of the animals inflicting the bites, nothing can be inferred from such statements; but as to the Heywood cases, it may be pointed out that, if actually rabid, it is still somewhat premature to present testimonials in support of the efficacy of the remedy.—*Lancet*, May 3, 1890.

Druggists' Charges.

Complaints having been preferred to the Austrian authorities to the effect that the apothecaries at certain fashionable springs and health resorts were demanding very high prices for filling prescriptions, and otherwise overcharging, an investigation was recently ordered the result of which was an official "warning" to all apothecaries at "*Bade und Kurorte*" notifying them that they must closely adhere to the scale of prices in force in Vienna. This led to replies, which set the authorities to investigating the tariff of the Viennese apothecaries, and the result was a discovery that some of these had been heavily overcharging. Thus the matter stands at last advices.—*National Druggist*, March 15, 1890.

International Sanitary Regulations.

One of the most important questions which has been submitted to the Pan-American Congress was, undoubtedly, that which asked for a decision upon means tending to prevent the conflict which may arise at the time of epidemic invasion between the diverse sanitary regulations which the American nations have seen fit to adopt in order to shield themselves from such invasions. A committee was appointed to examine the work of special sanitary congresses and conferences, which have met at different times in several parts of the world; and it has reached its conclusions by accepting the results of exhaustive studies, made by men eminent in the profession in Europe as well as in America. The report of the committee, which was adopted by the Congress, says that complete isolation, which, theoretically, appears to be the most effective prophylactic against the invasions of epidemic diseases, does not afford, in practice, satisfactory results as a sanitary measure, but tends, on the other hand, to notably injure the commercial interests of the countries. Dr. Francisco Rosas, President of the Sanitary Congress of Lima, thus expresses himself on this point: "It is scientifically demonstrated by innumerable facts that the closing of ports and frontiers does not prevent the invasion of epidemics; that these enter and develop with greater violence in the countries which pretend to isolate themselves, because, under the mistaken belief that they are free of all danger, they disregard the proper means to restrain the development of the epidemic, and, above all, to lessen its severity."

But, if absolute isolation, as a prophylactic, is nothing more than an illusion, the same may not be said of the sanitary means that modern science has placed within our reach for the disinfection of infected localities, as well as to prevent the introduction and development of contagion in those which have remained in a state of health.

The committee, in conclusion, suggests that, although it does not appear that the plans of the Sanitary Congress of Lima, of 1889, have passed into the category of international compacts, it is to be hoped that they will be accepted by the governments that participated in the said Congress, because those plans were discussed and approved by medical men of acknowledged ability.

If these were duly observed in all America they would prevent, under any circumstances, the conflict which usually arises between the obligation to care for the public health and the principle of freedom of communication between countries.

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CHARLES W. DULLES, M.D.,
EDITOR AND PUBLISHER.

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The Editor will be glad to get medical news, but it is important that brevity and actual interest shall characterize communications intended for publication.

OBJECTIONABLE CENSUS QUESTIONS.

A natural feeling of surprise has been excited by the printed questions which have recently been sent to physicians in the United States, asking them to report to the Census Office the names of persons suffering with a variety of chronic diseases and defects. To the immediate and general expressions of disapproval which came from physicians in different parts of the country, a certain concession seems to have been made by the issuing of instructions to the enumerators that, when replies to questions of this sort are refused, they are to mark "refused to answer" opposite the questions, in their returns, and not to attempt to impose the penalty which the law provides for refusal. It is stated in this connection that "all legal proceedings will be instituted by the Washington office."

It is to be hoped that this means that no such proceedings will be instituted; for we cannot see how the Census Bureau could insist upon pushing to a conclusion the foolish provisions of the law under which they are operating. As a rule the inhabitants of any country should submit to the impositions of law-makers whom they themselves have chosen, and they should also be willing to admit that there may be good reasons for what seems to them entirely unreasonable, and therefore submit without cavil. But there are occasions when it is proper to refuse obedience to laws which appear to a large and intelligent and conscientious body of citizens to be unjust or unwise, especially if such refusal has a reasonable chance of leading to the repeal or suspension of such laws.

The present occasion we believe to be such a one, and we think it right and not unwise to suggest to the readers of the MEDICAL AND SURGICAL REPORTER that they refuse to furnish the enumerators or the Washington Office with the names of persons of whose defects or diseases they have become informed in their professional and confidential relations with them. We have no doubt that the attempt to make witnesses of physicians, except in courts of justice or tribunals to which the functions of courts are attached, is unconstitutional, and cannot be carried out.

We have no idea that the Census Office will proceed against any one who declines to disclose the professional confidences of his medical experience; and, if it should, we have no idea that the courts will sustain it in doing so.

The Editor of the REPORTER will decline to answer the questions referred to, on the grounds indicated above, and he hopes that all the physicians in the country will do the same; because the more there are who do this, the stronger will be the force of the protest against what we all must think to be a false step on the part of the framers of these inquisitorial questions, and a serious

invasion of the rights of those who have committed to us secrets of the most sacred character.

TREATMENT OF AGGRAVATED CASES OF HEMORRHOIDS.

Piles are well known to be a very common disease. In very many cases they do not require operative treatment, as their causes —such as produce a determination of blood to the rectum or retard its return—can be obviated by general medical and local treatment. The numbers of operations which have been performed for piles, and the fact that there are not a few men who devote themselves to diseases of the rectum as a specialty, indicates that there is a large number of cases left in which operative treatment is necessary. In a few of these the disease is so aggravated by continuance for years as to justify heroic measures. It is for such cases that Dr. Lewis S. Pilcher, in the *Annals of Surgery*, May, 1890, recommends what is known as Whitehead's operation. In these cases, he says, the surgeon has no longer to do with a simple varicose condition of the hemorrhoidal veins, nor with a fairly well defined and circumscribed polypoid hypertrophy of the vessels and submucous tissues, but with a true angeioma, which, although on its surface it may be more or less tabulated, in its deeper portion is formed by a continuous network of dilated vessels or cavernous spaces bound together by a varying amount of connective tissue. These tumors are richly supplied with blood from terminal branches of the middle meningeal artery, which descend to them almost vertically in the submucous coat of the rectum. A dozen of these vessels may require tying in the worst cases. Their pulsation can be felt by introducing the finger into the rectum above the tumor. Dr. Pilcher has had six cases of the kind described; the patients were all in the prime of life, between thirty and forty years of age, and in all but one the piles dated back to their early youth. This fact is held to indicate an original inherent developmental defect in the vascular network at the lower end of the rectum. Associated with the angeioma are œdema and relaxation of the adjacent mucous membrane and of the sphincter, which add greatly to the sense of weight and discomfort. But, notwithstanding the apparent gravity of the disease and the great drain upon the patient's strength by loss of blood and mental and physical suffering, the tumor occupies usually only from an inch to an inch and a half of the rectum, and is superficial, involving only the mucous membrane and the submucous connective tissue, so that it may be enucleated readily from the sphincters. These considerations make the operation of excision, or Whitehead's operation, the most certain method of disposing of the tumor.

Regarding the danger of the operation, nothing more need be said than to quote the results of Mr. Whitehead, which he reported to the British Medical Association, in August, 1886. He had up to that time operated on more than three hundred patients, without a death, a single instance of secondary hemorrhage, or a single case in which any complication, such as ulceration, abscess, stricture or incontinence of feces had occurred. Mr. Whitehead further stated that, to the best of his knowledge, every patient had been completely and permanently cured. Nevertheless Dr. Pilcher thinks it should be ranked as a major operation, and that in the hands of an unskilled operator it would justify the opinion of Kelsey, that it is "naturally difficult, tedious and bloody."

The cautions which Dr. Pilcher advises are important. In the first place care should be taken not to injure the sphincter, lest incontinence of feces result. It is by no means easy to recognize the fibres of the sphincter, especially when the tumor is large and the muscle flabby, and the additional preliminary stretching has entirely relaxed it. The first steps in the operation, therefore, should be characterized by great care

in the identification and avoidance of the sphincter. When, he says, the muscle has been identified and drawn aside at a given point, the further enucleation may be done with expedition and without danger to it.

A second caution pertains to the tumor itself. If care is not taken to keep close to the surface of the muscle, and thus to keep outside of the vascular tissue of the tumor proper, the process of enucleation will be more difficult and will be attended with an unnecessary amount of venous hemorrhage. When, however, the sound tissues beyond the tumor have once been reached at any point, the further enucleation may be accomplished readily and safely by pursuing the enucleation circularly around the bowel from this point, and working downward to the anus. The dissection should be pushed well upward beyond the diseased portion and at all points, at the same level, so that the final transverse section shall pass through healthy tissue, and so that there shall be no redundancy of tissue at any part from which ectropion ani might result. None of the skin, however, should be cut away; for, while at the time of suturing the sutures will be well outside the anus, as time passes the walls of the rectum will regain tonicity and retract upward until finally the line of sutures disappears within the margins of the anus.

This operation, it will be remembered, Dr. Pilcher recommends now only in the most aggravated cases of hemorrhoids. His judgment is that it is based upon sound surgical principles and that it is a valuable and permanent addition to operative surgery. There can be no question that the operation is thorough and complete, and with the testimony of two such trustworthy surgeons as Mr. Whitehead and Dr. Pilcher there would appear to be no doubt that it is relatively free from danger in skilled hands; it is therefore probable that with those who have experienced its merits it will become more popular.

TREATMENT OF STRICTURE BY THE RETAINED SOUND.

The difficulty of treating certain cases of stricture of the urethra, especially when all the appliances of urethral surgery are not at hand, is often very great; and medical practitioners may regard with more than ordinary interest any method which promises to lessen this difficulty. Such a method has been proposed by Gueterbock, in an article in the *Deutsche Zeitschrift für Chirurgie.* It consists in the introduction into the urethra of a fine flexible bougie, or sound, and leaving it in place for three days. The sound should not quite fill the caliber of the stricture, and will thoroughly drain the bladder, as is well known to be the case with solid instruments left in the urethra. Gueterbock states that after the sound has remained in place for three days, on its withdrawal it will be found that the urethra will admit an instrument corresponding to its normal caliber.

In using this method it is important that the urethra shall be thoroughly cleansed of all pus or other material capable of exerting a deleterious influence upon the mucous membrane, and that the bougie shall be rendered aseptic.

The explanation of the action of this method is that the bougie, by its presence, promotes relaxation and softening of the tissue of the stricture. Gueterbock says it is especially indicated in cases in which great irritability and sensitiveness is produced by the introduction of dilating instruments, and when these symptoms cannot be relieved by narcotics, or are accompanied with a tendency to hemorrhage; in cases of injuries produced by the catheter, especially in cases of false passages; in cases in which the stricture is difficult to enter, in consequence of its eccentric position or the valvular character of its orifice, and in cases of necessity, where it is desired to give the urethra a normal caliber as expeditiously as possible, without resorting to cutting or divulsion.

The treatment of stricture of the urethra with retained sounds is contra-indicated in cases of stricture calling for more forcible methods; further, in strictures with exceedingly callous tissue; and, finally, when the urine is very irritating and likely to injure the mucous membrane if kept in contract with it for any length of time.

The statement of these indications and contra-indications will probably suggest that the method is hardly to be regarded as a panacea, and also that it is hardly to be expected that it would always bring a strictured urethra in three days to such dimensions that it would admit an instrument corresponding to its normal caliber. Nevertheless, it would probably be worth while to give the method a fair trial; for if it accomplished much less than is claimed, it might still be a great boon to medical men and their patients.

MASTURBATION.

A physician, brought more or less constantly in contact with cases suffering or supposed to be afflicted with disturbances connected with the misuse of the generative organs, witnesses, in the majority of instances, humanity in the picture of abject misery. Most persons so afflicted, before consulting a regular practitioner of medicine, have read and re-read advertisements in the secular press of the untold evils resulting from their supposed condition, with the natural consequence of working up their mental imaginations to a state that beggars description, and makes them an easy prey to the so-called specialists. It is not to be wondered at, then, that many, particularly those who practice masturbation, some of whom are naturally weak-minded, wind up their career in insane asylums. Such being the case, it behooves the medical profession to adopt some measures to counteract, if possible, this tendency of consulting quacks, with its attending evils. The so-called popular lectures upon these subjects do but little if any good in this direction; in fact, their tendency, according to good authority, is harmful rather than otherwise. The family physician, in a quiet way, with a little tact, can exert a wonderful influence in ameliorating these evils, which to-day are sapping the vitality of many of America's youth.

In masturbation we have a habit, the practice of which is found to occur under a variety of circumstances. First, in very young children, arising from some local irritation, want of cleanliness, etc.; secondly, in individuals who have passed, reached, or are near the age of puberty, and have either accidentally learned or been taught this pernicious habit; thirdly, a class of cases may be mentioned in which the practice has a central origin, in certain forms of brain-disease or cerebral deficiency, as is seen in some forms of insanity and in idiocy.

Excluding the last class of cases, we have two classes, in which the physician may deal hygienically and morally as well as remedially. If every physician made it a habit to carefully examine the new-born infant in respect to its genitalia, separating any adhesions to the glans penis, and would then instruct the parent as to the proper method of keeping the parts clean, one cause of irritation to the male organ would be removed.

In the second class of cases the moral aspect of a physician's duty is exemplified. As the family medical adviser, he should see to it that the youth approaching manhood is notified by either the parent or himself of the serious constitutional effects the indulgence in masturbation will produce. Such information, coming from such sources, cannot fail to accomplish some good, sooner or later.

Leaving those cases of self-abuse requiring only moral persuasion and advice, we will devote a few moments to the consideration of persons who have masturbated excessively and who are suffering from the nervous shock incident to the oft-repeated orgasm. It is in such cases as these that the quack finds the largest and most lucrative field for

his nostrums. It is in just such cases that his pamphlets and circulars, under alluring titles, find eager perusers, and do a harm that can scarcely ever be corrected.

In the treatment of these cases, much can be done by advising brisk exercise, of both mind and body. Early rising and careful diet should be recommended. Remedies directed towards the treatment of symptoms connected with the nervous, circulatory and digestive systems will be required. Lastly, but by no means least, the physician must gain the patient's entire confidence, not by wounding and severely censuring, but by sympathy and encouragement; trying to elevate him out of his bad habits, in such manner as discretion and the patient's disposition may suggest. Such a course will succeed in the largest number of cases, provided time and sufficient attention be given.

READING AND THE PENNSYLVANIA STATE MEDICAL SOCIETY.

At its last meeting the Berks County Medical Society adopted a resolution instructing the delegates who will attend the meeting of the State Medical Society at Pittsburgh, June 10, to extend an invitation to that body to meet in Reading in 1891. To defray the expenses for the entertainment of delegates the members of the Society obligated themselves to raise the sum of $1,000, and it is the purpose of the Financial Committee to call upon citizens in general to lend their aid in meeting the expenses incident to the occasion.

The State Society has not met in Reading since 1848, and the members of the profession there would be very much gratified if it would come to them in 1891. They are prepared to give the Society a hearty welcome, and the more so since they are now working with great activity and harmony in the interest of medical science. As the meeting of the Society this year is to be in the extreme western part of the State, it might naturally meet in the eastern part next year.

BOOK REVIEWS.

[Any book reviewed in these columns may be obtained upon receipt of price, from the office of the REPORTER.]

SPINAL CONCUSSION: Surgically considered as a cause of spinal injury, and neurologically restricted to a certain symptom group, for which is suggested the designation Erichsen's Disease, as one form of the traumatic neuroses. By S. V. CLEVENGER, M. D., Consulting Physician Reese and Alexian Hospitals, Chicago. With thirty wood-engravings. 8vo, pp. v, 359. Philadelphia and London: F. A. Davis, 1889. Price, $2.50.

Much attention in recent years has been given to a study of injuries to the spine occurring in railway collisions. Many suits for damages on account of such injuries have stimulated specialists in nervous disease to a critical study of their pathology. In the present work, Dr. Clevenger has endeavored to review carefully the entire subject. His general conclusion is, that the spinal sympathetic system is the main seat of the disease, and that in consequence the cord functions are deranged. The author discusses the writings of Erichsen, Page and Oppenheim, and gives illustrative cases from his personal observation and from the published cases of others. He prefers to call the results of spinal concussion Erichsen's Disease. Of this he gives the symptoms, diagnosis and the differential diagnosis from various forms of myelitis and meningitis, hysteria, and from other conditions liable to cause spinal symptoms.

The treatment of spinal concussion is dismissed with very brief consideration. He thinks it safe to treat the initial stages as those of a severe strain, with hot fomentations, rest in bed, or sitting, as the patient feels the most comfortable. Darkness and quiet are necessary, and disagreeable mental influences should be removed as much as possible. Excitement of all kinds and stimulants must be avoided. Ergot, he says, gives far better results than the bromides. It should be given in doses of from ten minims to a fluid drachm, three or four times daily, to allay the pain in the back and irregular circulation.

The final chapter, on medico-legal considerations, contains a bitter denunciation of the system of medical education in this country, and of the cupidity and rascality of many practitioners. In declaring, however, that "it is the physician's duty to coach the attorney, in and out of court, whether he testify or not," he declares in favor of a practice which makes physicians partisans in a suit instead of disinterested advisers of the court—their highest medico-legal function.

The publication of Dr. Clevenger's book is timely. It is evidently written by a man who has strong personal convictions on the subject, and who is not afraid to maintain them. The book will be consulted with profit by all who are interested in spinal concussion, especially from a medico-legal point of view, and it is a valuable contribution to that subject.

FOOD IN HEALTH AND DISEASE. By I. BURNEY YEO, M. D., F. R. C. P., Professor of Clinical Therapeutics in King's College, London, etc. 8vo, pp. x, 583. Philadelphia: Lea Brothers & Co. Price, $2.00.

Dr. Yeo has divided his book into two parts; in the first he treats of foods in health, and in the second of foods in disease. The nature, origin and purpose of food are mentioned, metabolism described, and the various articles of food taken up particularly and their usefulness indicated. The author goes at some length

into dietaries suitable for soldiers, seamen and prisoners. Food in infancy and childhood receives a fair share of attention, due acknowledgment being made to Dr. Louis Starr for his writings on the subject.

In the second part of the book feeding in acute diseases in convalescence, and in various affections of the stomach, liver and kidneys is considered. The dietetic treatments of obesity of Banting, Ebstein, and Oertel are clearly presented and their differences pointed out. None of the methods, the author justly says, is appropriate to the treatment of all cases of obesity indiscriminately, while any one of them may prove successful in suitable instances. Dr. Yeo also discusses the dietetics of anemia, neurasthenia and phthisis, and under the first two diseases very naturally quotes freely from Weir Mitchell. A selection of hospital dietaries and dietaries for invalids forms a fitting conclusion to the volume.

The appearance of this book is timely, and its subject-matter both interesting and valuable. It would be a revelation to many physicians to learn how much in the way of prevention and treatment of disease can be accomplished by a proper selection of the food. The question of the suitability of various foods to meet certain conditions is one of the greatest importance; Dr. Yeo is to be congratulated on having thrown some light on it, though it must be admitted that a good deal of obscurity still surrounds it.

DIE SYPHILITISCHEN FINGER UND ZEHENENTZÜNDUNGEN, von Dr. Karl Koch, in Nürnberg. SAMMLUNG KLINISCHER VORTRÄGE. No. 359.

SYPHILITIC INFLAMMATIONS OF THE FINGERS AND TOES. By Dr. Karl Koch, Nürnberg. 8vo, pp. 40. Leipzig: Breitkopf and Härtel. April 21, 1890. Price, 75 pfennigs.

Dr. Koch gives a long and detailed description of the inflammations of the fingers and toes occurring in connection with syphilis. The cases are not frequent. The literature is scanty. The author distinguishes several varieties: a cutaneous or subcutaneous, a periosteal, an osseous or medullary, and an articular. One may lead to the other. Still there may be an independent inflammation of a joint. Koch prefers the general designation, doctylitis. Bone is more frequently involved than soft structure. In young children osteomyelitis is the more common, in adults periostitis. Tendons and their sheaths may participate in the process. These inflammations appear as late manifestations of syphilis. Pathologically, the fibrillary connective tissue and the vessels, especially the adventitia, are the seats of the process. Diagnostically, the distinction is to be made from tuberculosis, gout, diabetes and neoplasms, sarcomata and enchondromata. The prognosis is not bad if appropriate treatment is instituted early.

Literary Notes.

—The *Cosmopolitan* has become one of the most attractive of the American monthly magazines. The June number deserves special notice; the illustrations are graceful and artistic, and the class of articles is excellent. S. G. W. Benjamin's "Farm Life and Irrigating in Persia" gives many new ideas of this Oriental people, while Rollo Ogden's article on "Leading Writers of Modern Spain" will prove interesting to all lovers of literature. In this number Miss Bieland takes us with her through Japan; each step of her flying trip being illustrated.

—The House Committee on Patents has ordered a favorable report on a bill which is identical with the International Copyright bill already acted upon adversely by the House, with the addition of a new section, which provides that it shall be of effect only where reciprocal advantages are granted by foreign countries to American authors.

—With the May issue, the *Sammlung Klinischer Vorträge*, which for twenty years has been under the editorial direction of Richard von Volkmann, passes into the hands of Ernst von Bergmann, Wilhelm Erb and Franz Winckel, representing the departments of surgery, medicine, and gynecology and obstetrics. The May number will contain papers from the pen of each: by von Bergmann on Tubercular Ostitis in and at the Atlanto-occipital Joint; by Erb on Dystrophia Muscularis Progressiva; by Winckel on the Rupture of Extra-uterine Gestation sacs.

Correspondence.

The Questions asked by Medical Examining Boards.

To the Editor.

Sir: In the Reporter, April 19, page 464, is an article quoted from the *Northwestern Lancet*, giving answers from applicants to the State Board. These speak for themselves. They show a great necessity for some such examining body. They were, however, probably published by our State Board to gain favor with the profession abroad and the public at large. They were also given to our daily press, and were written up in quite a sensational style. Our State Board is not endorsed by quite a large body of the resident physicians. They have sought to make for themselves a reputation of being strict, and have resulted in being ridiculous and often unjust. I am thoroughly in favor of advanced medical education, but in a practical way. I write, not so much to find fault with our own Board as to bring the matter before the profession, that if possible these things may be avoided elsewhere. The law here makes no appeal from the Board. It is true one can appeal to the Governor, but the examination papers are simply referred to and the percentage counted. There is no appeal from unreasonable questions. The papers are prepared by each individual member of the Board, but they are not present at the examination. Quite often questions are ambiguous, and the applicant has no means of knowing the real meaning. The time allowed for examination is often entirely out of proportion to the work re-

quired. When the writer passed before that body, we were given fourteen or fifteen *topics* to write upon, in obstetrics and gynecology, and had an hour and a half in which to do the work. In practice, the examiner was a specialist and gave but four out of ten questions that the general practitioner would ever meet. In surgery we had two subjects, and the ten questions went into the minor details of two chronic troubles that a man may not see in a lifetime. There was not a single question on acute surgery. The whole examination seemed to be a bid for men fresh from the schools and crammed for an examination.

From what I see of examination papers before and since, they have followed the same plan. Some of the examinations were quite fair and showed an endeavor to get practical answers. Let us have longer study in the medical schools, more restrictions in admissions to them, and let us have also examining boards; but let us have with them all, common sense. A picked list of questions would put our Board in as unfavorable a light as the applicant referred to in the *Northwestern Lancet.*

Yours truly,
C. A. DONALDSON, M. D.

Parker, Minn.,
May 20, 1890.

NOTES AND COMMENTS.

Pennsylvania Medical Society.

The programme of the fortieth annual session of the Medical Society of the State of Pennsylvania, to be held at Pittsburgh, June 10–13, provides for the first day an address of welcome, by Dr. E. A. Wood; an address on medicine, by Dr. J. C. Wilson, Philadelphia; an address on hygiene, by Dr. T. J. Mays, Philadelphia; a report of 340 cases of labor, by Dr. J. M. Batten, Pittsburgh; a report of a case of sarcoma of choroid, by Dr. Wm. C. Bane, Pittsburgh; and a paper on value of measures over medicines, by Dr. J. Madison Taylor, Philadelphia.

In the evening of the first day, President Dr. J. B. Murdock will deliver his Presidential Address.

On the second day there will be an address in laryngology, by Dr. Wm. H. Daly, Pittsburgh; and papers on diet in therapeutics, by Dr. Solomon Solis-Cohen, Philadelphia; trephining in traumatic insanity, by Dr. Samuel Ayers, Pittsburgh; needed legislation in the treatment of dipsomania, by Dr. T. D. Dunn, West Chester; report of the Committee on Clinical Research, by Dr. John B. Roberts, Chairman; report of the Committee on Management of Pennsylvania Hospitals for the Insane, by Dr. Samuel Ayers, Chairman; an address on surgery, by Dr. John B. Roberts, Philadelphia; papers on the intraocular syringe in cataract extraction, by Dr. J. A. Lippincott, Pittsburgh; management of obstinate dropsies, by Dr. James Tyson, Philadelphia; chemistry of cooking, by Dr. Traill Green, Easton; the present status of the code of ethics, by Dr. J. H. Packard, Philadelphia; the value of primary anæsthesia from ether, by Dr. J. H. Packard, Philadelphia; prolapsus of the rectum in children, by Dr. H. R. Wharton, Philadelphia.

On the third day there will be an address in obstetrics, by Dr. Frances N. Baker, Delaware Co.; papers on rational midwifery, by Dr. J. Milton Duff, Pittsburgh; what should be required of an abdominal surgeon, by Dr. M. Price, Philadelphia; suppurating ulcer of cornea, by Dr. Edward Jackson, Philadelphia; the report of Committee to Revise the Constitution of the Medical Society of Pennsylvania, by Dr. Wm. M. Welch, Philadelphia, Chairman; an address in mental disorders, by Dr. Alice Bennett, Norristown; the physiological and therapeutic action of sulphur, by Dr. John V. Shoemaker, Philadelphia; the application of dry heat by steam, by Dr. G. M. Shilito, Allegheny; errors of refraction developed by loss of accommodation, by Dr. G. H. Cline, Jersey Shore; report of Committee on Medical Examiners, by Dr. L. F. Flick, Chairman; a paper on la grippe or epidemic influenza, by Dr. A. B. Braumbaugh, Huntingdon; report of Committee to Confer with State Committee on Lunacy, by Dr. H. C. Wood, Chairman; report of Committee on Pharmacy, by Dr. J. W. Holland, Chairman. Unfinished business.

Medical Society of New Jersey.

The one hundred and twenty-fourth annual meeting of the Medical Society of New Jersey will be held in the Heath House, Schooley's Mountain, June 10 and 11, 1890, commencing at 4 o'clock P. M., June 10. The programme provides for Tuesday an

annual address by the President, B. A. Watson, M. D., Jersey City, "A Historical Sketch of Surgery," and discussions upon subjects presented at last Annual Meeting: (1) Does the Early Administration of the Salicylates in Acute Articular Rheumatism Prevent Heart Complications? The discussion to be opened by Dr. E. J. Marsh. (2) Hydrophobia. The discussion to be opened by Dr. W. P. Watson. (3) Is Diphtheria Primarily a Local or General Disease? The discussion to be opened by Dr. U. Selover.

On Wednesday the Third Vice-President, Dr. Geo. T. Welch, will deliver an address on "Fathers and Sons;" and essays will be read by Dr. E. L. B. Godfrey, on Endometritis, and by Dr. Orren B. Gross, on "A Few Rare Cases of Abdominal Surgery."

Further information may be obtained by addressing Dr. E. P. Cooper, Troy Hills, Chairman of the Committee of Arrangements, or Dr. William Pierson, Secretary of State Medical Society, Orange, N. J.

Conference of State Boards of Health and Quarantine.

The National Conference of State Boards of Health met in Nashville May 19. Delegates were present from nineteen States. Resolutions were adopted urging, in case of an outbreak of yellow fever, such co-operation in administration on the part of the Northern States as will confine the disease to the point of initial attack, in place of the expensive, unscientific and unsatisfactory so-called quarantine at distant State lines. A resolution was also adopted urging upon the health authorities of each State the importance of such administration of any quarantine they may establish as will furnish protection to and show due regard for the rights of States lying beyond them.

Regulating the Practice of Medicine in Washington, D. C.

A bill introduced by Senator Ingalls, by request, to regulate the practice of medicine in the District of Columbia was reported May 24 from the Committee on the Affairs of the District. It provided originally for the appointment of a Board of Examiners to examine applicants for license to practice, which should consist of fifteen members, five of them homœopaths. The Committee amended the bill, so as to give the eclectic school two representatives on the Board, leaving the regulars with a majority of one.

Trinity University a Diploma-Mill.

Dr. P. Ripley Bradbury, who calls himself Dean of Trinity University (of Vermont), was arrested in Wakefield, Massachusetts, May 28, on the charge of using the mails in aid of a scheme to defraud in connection with alleged bogus diplomas. This concern is a diploma-mill and was exposed by the *Boston Herald*, September 29, 1889.

The Census and Benefit Societies.

Any one interested in the sick-benefit, funeral-aid and death-beneficiary associations of the United States can help make the statistics of their organizations for the forthcoming census more complete and disseminate the knowledge of the good work they are doing by sending the names of such societies as they may know of, and the addresses of their principal officers, to Mr. Charles A. Jenney, Special Agent of the Eleventh Census, 58 William street, New York City.

Cruelty to the Insane.

Dr. Henry M. Wetherill, Secretary of the State Committee on Lunacy, has addressed a letter to the physicians in Pennsylvania, in which he says:

In view of the fact that in the past instances have occurred in various parts of this State of cruel or improper treatment of insane persons in charge of private parties, and that through the aid of physicians and others the Committee on Lunacy were enabled to extend material relief to such insane persons, and for the purpose of ascertaining whether any such cases exist at the present time to whom assistance might be rendered, the Committee would ask again for information of any insane who are secluded, badly treated, or require hospital care and treatment. The Committee will, on information, investigate any such case. Any communication will be, if desired, considered as confidential.

Dose of Tincture of Nux Vomica.

Mr. Jonathan Hutchinson (*Archives of Surgery*, Jan., 1890, p. 280) says he has for many years prescribed the tincture of nux vomica very freely indeed. He thinks it the best of all tonics, for it very rarely disagrees, and he has never known it to produce poisonous effects. He generally gives 10 minims three times a day to an adult, but often double that dose. He has given 5-minim doses to a child of ten, and has, for experiment, taken himself a single dose of 30 drops and realized no symptoms of strychnia poisoning whatever.

He believes the tincture of nux vomica to be a safer and more convenient form than any of the solutions of strychnia, and it has also the advantage of not exciting alarm in the patient. He says it may be taken for months together, and does not diminish in efficiency. Mr. Hutchinson has had many patients who have taken more than was intended and yet never so far with any serious ill result.

He relates two cases. A gentleman, 33 years old, took by mistake five consecutive doses of forty minims three times a day instead of ten minims during the same time, as ordered. The only ill result was that the head had been made to feel dull and the eyes heavy, as if he had been drunk over night. There was no muscular twitching.

In the second case the patient took forty minim doses of the nux vomica tincture. He continued it three times a day for four doses in succession. The symptoms were exactly as in the other case—a dull feeling in the head but no twitchings. He felt "wonderfully better for it." — *Medical Chronicle*, March, 1890.

Paracresotinate of Soda.

Paracresotinate of soda, a new antipyretic, is a fine crystalline powder and has a bitter although not unpleasant taste. It is soluble in twenty-four parts of hot water, and is not precipitated when the water becomes cold. According to the *Journal de Médecine*, March 23, 1890, doses of forty-eight to sixty grains produce no ill-effects upon healthy animals. Free perspiration is usually caused by it, but otherwise no effect upon the digestive functions or upon the temperature is noted. In about half an hour after its administration the urine will assume a violet hue, due to the action of chloride of iron, which may be traced in the urine for thirty hours. Paracresotinate of soda has been used in various febrile diseases incident to childhood, and in every case the drug proved itself of unquestionable value as a reliable antipyretic. Its action was especially beneficial in cases of acute gastro-intestinal catarrh, occurring in very young children. The following formula is recommended:

℞ Paracresotinate of soda . 15 to 30 grains.
Laudanum . . . . . 2 to 4 drops.
Cognac . . . . . 16 minims.
Simple syrup . . . . . 1½ fluid drachms.
Distilled water . . . . 7 fluid drachms.
Mix and give one teaspoonful every two hours.

As an antipyretic fifteen-grain doses given three times, one hour apart (for a child of twelve), would cause a fall of temperature of two to two and one-half degrees Fahrenheit within two to four hours.

Suture of Arterial Wounds.

Dr. Jassinowsky has published, as a graduation thesis in Dorpat, a series of experiments, made on animals, for the purpose of determining the conditions under which it is possible to stitch successfully wounds in arteries. He operated on horses, calves and dogs. The plan adopted was to dissect down to the artery, to open the sheath, and, after applying a clamp to the vessel, to stitch the wound with silk, the needle passing through the external and middle coats only; a reef knot was then tied, and the ends cut off close. When the clamp was removed the vessel was compressed, and all the fasciæ and skin incisions carefully stitched with interrupted sutures. The external wound was then sealed by means of photoxylin, a substance which, though first used by photographers, has recently been introduced into surgical practice as an improvement on collodion for sealing wounds. In all the cases operated on the wounds healed satisfactorily. When viewed from within, an arterial wound that has been recently sewn appears as a fissure of the intima filled up with blood-corpuscles, which form a minute thrombus, causing the sulci of the intima to disappear. Later on a cross section through the sulci gives the appearance of a funnel-shaped space filled with a homogeneous, horny substance. The endothelium is much augmented. In time the whole of

the coats at the wounded spot become thickened, and the elastic membrane is not to be found. Dr. Jassinowsky concludes that wounds not extending beyond half the circumference of a large artery, also longitudinal and oblique wounds, may be successfully sutured if antiseptic precautions can be thoroughly carried out, as was the case in all his experiments. When the vessel lies very deep, however, it is impossible to get at it sufficiently well to practice the delicate manipulation required in the operation. Of course, after a wound has occurred, the sooner operative measures are undertaken the better. He calls attention to the peculiar blowing or rasping systolic murmur always heard over a wounded artery, and the thrill which is perceptible to the touch, which constitute what is known as "Wahl's phenomenon," a discovery made by the eminent Dorpat professor, lately deceased, as a valuable diagnostic sign in cases where it is possible that arteries may have been wounded. —*Lancet*, Feb. 22, 1890.

Hydrophobia.

It is reported in the newspapers of June 2, that a farmer living near Petersburg, Lancaster county, Pa., died from hydrophobia on Saturday after two days' illness. He was bitten by a dog two months ago.

Seven children were bitten by a dog at St. Joseph, Illinois, May 29, and the dog died in a convulsion a few minutes later. The telegram recording the facts adds that "a madstone was applied to each of the children's wounds, and it adhered in each case." Notwithstanding this the patients were sent to New York to be treated by Dr. Gibier in the Pasteur Institute there, and they arrived in New York June 2.

NEWS.

—Dr. George H. Rohé has removed to No. 18 West Franklin Street, Baltimore, Md.

—Dr. James A. Henshall, of Cincinnati, has been appointed a Fish Commissioner for Ohio.

—Dr. John Aulde announces that he has severed his connection with the Medico-Chirurgical College, of Philadelphia.

—Dr. Kate W. Baldwin, a graduate of the Woman's Medical College, has been elected Resident Physician in the Philadelphia Polyclinic Hospital.

—According to the census of 1881, there were 131,618 lepers in all India. It is estimated that there must now be over 200,000 lepers in that country, most of whom are at large.

—The Charing Cross Hospital, London, was the site of a conflagration, May 4. Nobody was injured, and the damage, which was slight, was confined to the Victoria Ward.

—The University of Florida was founded May 30 at Tarpon Springs. Among the incorporators are Hamilton Disston, Jacob S. Disston, A. P. Stafford, F. H. Davis and Dr. Charles E. Sajous.

—On May 29, 1890, the Pennsylvania School for Feeble-Minded Children, at Elwyn, Pa., held its thirty-seventh anniversary. A new building was opened, which will accommodate 120 children.

—The medical faculty of the newly-founded University of Lausanne consists of seven ordinary professors, each of whom is to receive a salary of from 4,000 to 5,000 francs ($800 to $1,000), together with students' fees.

—It is reported that leprosy has increased to such an extent in Cape Colony, that a hospital for lepers has been founded on Robben Island near the African coast. In India legislation is urgently demanded for the suppression of leprosy.

—A committee has been formed at the Sorbonne for encouraging foreigners to study at the University in Paris. M. Pasteur is president. It is proposed to give special facilities to foreign students immediately on their arrival in Paris.

—A death has taken place at Tunbridge Wells, England, following the use of chlorodyne. The coroner's jury rendered a verdict of death by "misadventure," at the same time recommending that the sale of such powerful patent medicines be "restricted."

—It is said that Dr. A. G. Young, Secretary of the Maine State Board of Health, was recently suffering from a disease which had baffled his physicians, one of whom finally sent a sample of the wall-paper from the sick-room to a chemist for analysis. The examination revealed that the paper contained large quantities of arsenic. Since Dr. Young's removal from this room his recovery has been rapid.